

09/708,974

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09/708,974

LJ ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 2001:283977 CAPLUS
 DOCUMENT NUMBER: 134:295995
 TITLE: Synthesis, compositions and uses of steroidal
 alkaloids as regulators of the hedgehog pathway
 INVENTOR(S): Beachy, Philip A.
 PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
 SOURCE: PCT Int. Appl., 164 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS (Continued)

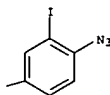
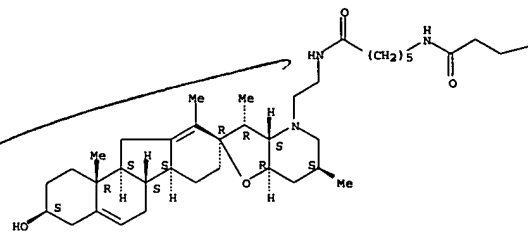
PAGE 1-A

PATENT NO.		KIND		DATE		APPLICATION NO.		DATE	
WO 2001027135		A2		2001.04.19		WO 2000-US28479		2000.10.13	
M:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, ES, ES, FI, GB, GD, GE, GH, GM, HT, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MA, MD, MC, MG, MK, MN, MX, MY, NG, NI, PT, RO, RU, SA, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, RU, ZA, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM								
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, MN, SN, TD, TG								
PRIORITY APPL. INFO. : U 1999-15931013									
U 2000-259273 P 20990810									

OTHER SOURCE(S): MARPAT 134:295995
AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cyclopamine deriva. is presented.

IT 334616-53-4P ~~is presented.~~
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
 PREP (Preparation); USES (Uses)
 (synthesis, compns. and uses of steroidal alkaloids as regulators of the hedgchose pathway)
 RN 334616-53-4 CAPLAS
 CN Benzenepropanamide,
 4-azido-3-iodo-N-[6-[[2-[(3S,1R,3'S,6'S,6aS,6bS,7'R,2'R,11aS,11bR)-1,2,3,3',4',5',6',6'a,6b,7',7'',7'a,8,11,11a,11b-octadecahydro-3-fuoro-3',6',10,11b-tetrabenzylamino]9H-benzo[a]fluorene-9,2'-(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA

Absolute stereochemistry.



PAGE 1-B

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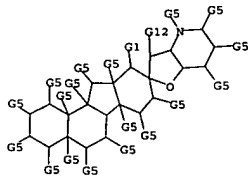
=> d ibib ab fqhit 1-3

L10 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 134:295995 MARPAT
 TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
 INVENTOR(S): Beachy, Philip A.
 PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
 SOURCE: PCT Int. Appl., 164 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:		US 1999-159215 19991013		
		US 2000-229273 20000830		

AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cyclopamine derivs. is presented.

MSTR 8



MPL: claim 7
 NTE: or unsaturated forms, and/or seco-, nor- or homo-derivatives
 NTE: additional substitution and ring formation also claimed

L10 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 133:99549 MARPAT
 TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene/patched agonists
 INVENTOR(S): Dudek, Henryk; Ji, Benxiu
 PATENT ASSIGNEE(S): Ontogeny, Inc., USA
 SOURCE: PCT Int. Appl., 114 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2001034337	A1	20011025	US 2001-867311	20010529
PRIORITY APPLN. INFO.:		US 1999-115642 19990113		
		US 1999-119594 19990210		
		US 1999-142124 19990702		
		US 1999-417564 19991014		
		WO 2000-US873 20000113		

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an

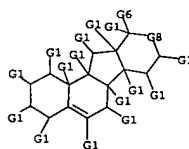
amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds.,

e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

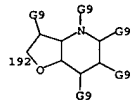
MSTR 18

L10 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)

L10 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



G8 = 192

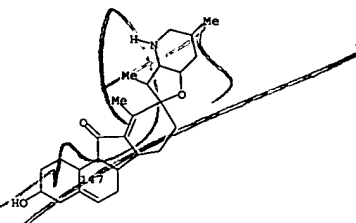


MPL: claim 5
 NTE: substitution is restricted

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L10 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 131:267077 MARPAT
 TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
 INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey
 PATENT ASSIGNEE(S): A. Johns Hopkins University School of Medicine, USA
 SOURCE: PCT Int. Appl., 136 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

L10 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, ES, FI, GB, GD, GE, GH, GM, HP, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, MY, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916363	19990409
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			

MPL: claim 3

REFERENCE COUNT:
 REFERENCE(S):

- 7
 - (1) Aruba: EP 0020029 A 1980 CAPLUS
 - (2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
 - (4) Sanwa Shiyuuyaku Kk; JP 04230696 A 1992 CAPLUS
 - (5) Schramm, G; US 3673175 A 1972 CAPLUS
 - (6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

PRIORITY APPLN. INFO.:
 US 1998-81186 19980409
 US 1998-81263 19980409
 US 1998-90622 19980604
 WO 1999-US7811 19990409

AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.

MSTR 1

G4—G1

G1 - 147

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FILE 'REGISTRY' ENTERED AT 09:47:24 ON 13 NOV 2001

L1 STRUCTURE UPLOADED

L2 11 S L1

FILE 'CAPLUS' ENTERED AT 09:47:51 ON 13 NOV 2001

L3 1 S L2/THU

FILE 'CAOLD' ENTERED AT 09:48:27 ON 13 NOV 2001

L4 0 S L2

FILE 'USPATFULL' ENTERED AT 09:48:41 ON 13 NOV 2001

L5 0 S L2

FILE 'BEILSTEIN' ENTERED AT 09:48:52 ON 13 NOV 2001

L6 16 S L1

L7 275 S L1 FULL

L8 0 S L7 AND USC/FA

FILE 'MARPAT' ENTERED AT 09:49:51 ON 13 NOV 2001

L9 0 S L2

L10 3 S L2 FULL

09/708,974

=> d ibib ab hitstr 1-12

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:507523 CAPLUS
DOCUMENT NUMBER: 135:87198
TITLE: Use of steroidal alkaloids to reverse multidrug resistance
INVENTOR(S): Liscovitch, Mordechai; Lavie, Yaakov
PATENT ASSIGNEE(S): Yeda Research and Development Co. Ltd., Israel
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049279	A2	20010712	WO 2000-11866	20001228

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LJ, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.: 1L 1999-133809 A 19991230

AB The invention provides steroidal alkaloids for inhibiting or reversing multidrug resistance in cancer or in bacterial, fungal or parasitic infections. The steroidal alkaloid may be administered to the patient alone or in combination with an anticancer, antibacterial, antifungal or antiparasitic agent. Examples of steroidal alkaloids include members of the solanidane or spirocolane families (e.g. tomatidine), and C-nor-D-homo steroids, e.g. of the jervane or veratramine families.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
14410-98-1 14788-78-4 19773-24-1, Peimisine
24508-94-9, Tetrahydrojervine 212968-58-6, Verapatuline
347842-64-2

RI: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(steroidal alkaloids for reversal of multidrug resistance)

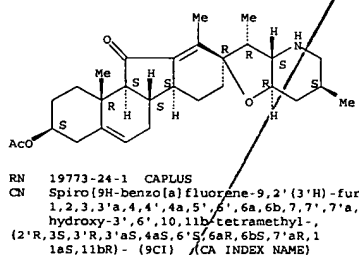
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

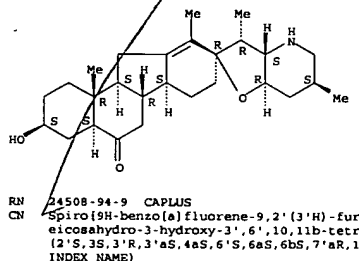
3-(acetoxyloxy)-1,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 19773-24-1 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-5(6H)-one, 1,2,3,3',4,4',4a,5',6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,4aS,6'S,6aR,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

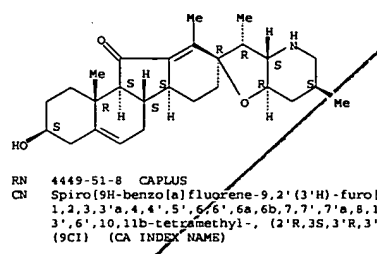
Absolute stereochemistry.



RN 24508-94-9 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(2H)-one, 1,2,3,3',4,4',4a,5',6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'S,3S,3'R,3'aS,4aS,6'S,6aS,6bS,7'aR,10R,10aS,11aS,11bS)-(9CI) (CA INDEX NAME)

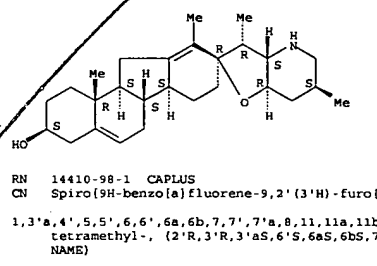
Absolute stereochemistry.

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

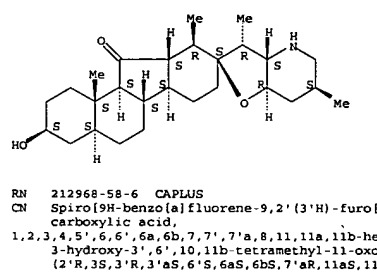


RN 14410-98-1 CAPLUS
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Absolute stereochemistry.

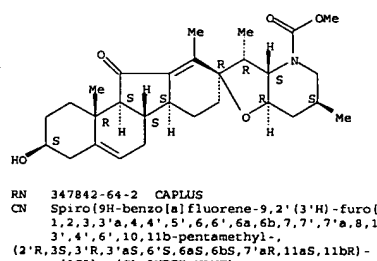
RN 14788-78-4 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(2H)-one,

L8 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



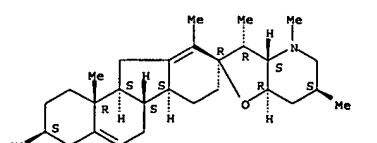
RN 212968-58-6 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridine]-4'-(3'aH)-carboxylic acid, 1,2,3,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-11-oxo-, methyl ester, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 347842-64-2 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',4',6',10,11b-pentamethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

L8 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:434884 CAPLUS

DOCUMENT NUMBER: 135:41031

TITLE: Methods using hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin production by pancreatic .beta.-cells

INVENTOR(S): Habener, Joel F.; Thomas, Melissa K.

PATENT ASSIGNEE(S): The General Hospital Corporation, USA

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041786	A1	20010614	WO 2000-US33575	20001208

W: AS, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.: US 1999-170282 P 19991210

AB The invention features a method of treating deficiency of insulin in a patient, comprising administering to a patient in need thereof hedgehog protein or nucleic acid in an amt. effective to raise the level of insulin

in the patient. A method is also disclosed for suppressing insulin secretion using hedgehog protein inhibitor, e.g. cyclopamine.

IT 4449-51-8, Cyclopamine 4449-51-8D, Cyclopamine, derivs.

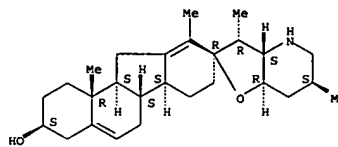
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USSES (Uses) (hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin prodn. by pancreatic .beta.-cells)

RN 4449-51-8 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

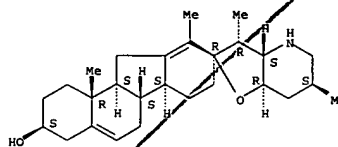
L8 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 4449-51-8 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4

REFERENCE(S):

- (1) Genentech Inc; WO 9953058 A1 1999 CAPLUS
- (2) German; US 6127598 A 2000 CAPLUS
- (3) Habrook, M; Genes and Development 1998, V12, P1705 CAPLUS
- (4) Kim, S; Proc Nat Acad Sci 1998, V95, P13036

CAPLUS

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2001:283977 CAPLUS

DOCUMENT NUMBER: 134:295995

TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway

INVENTOR(S): Beachy, Philip A.

PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA

SOURCE: PCT Int. Appl., 164 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.: US 1999-159215 P 19991013

US 2000-229273 P 20000830

OTHER SOURCE(S): MARPAT 134:295995

AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, put loss-of-function or smoothened gain-of-function/mutations. Synthesis of cyclopamine, jervine and cyclopamine der. is presented.

IT 334616-43-2P 334616-45-4P 334616-56-7P

RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USSES (Uses)

(synthesis, comps. and uses of steroidal alkaloids as regulators of the hedgehog pathway)

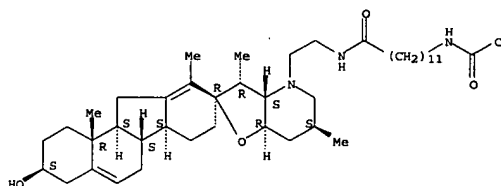
RN 334616-43-2 CAPLUS

CN Dodecanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-

1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'-(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-12-[(trifluoroacetyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

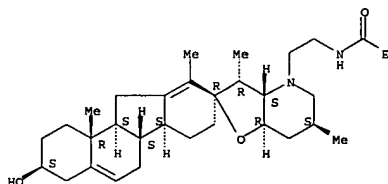


RN 334616-45-4 CAPLUS

CN Propanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-

1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'-(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-6-[(1-oxopropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 334616-56-7 CAPLUS

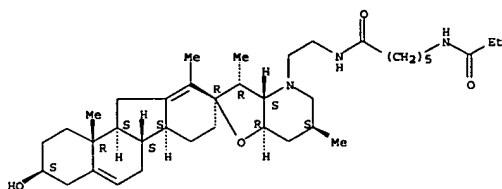
CN Hexanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-

1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'-(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-6-[(1-oxopropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

09/708,974

L8 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



L8 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:880985 CAPLUS
 DOCUMENT NUMBER: 134:37058
 TITLE: Therapeutic use of an inhibitor of a hedgehog or a hedgehog-related signaling pathway
 INVENTOR(S): Lamb, Jonathan Robert; Hoyne, Gerard Francis; Delleman, Margaret Jane
 PATENT ASSIGNEE(S): Lorientis Limited, UK
 SOURCE: PCT Int. Appl., 78 pp.
 CODEN: PTXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074706	A1	20001214	WO 2000-GB2191	20000605

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DO, DZ, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PK, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, SN, SV, TC, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.: GB 1999-13350 A 19990608
 GB 1999-21953 A 19990916

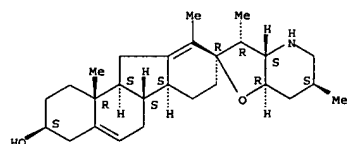
AB Use of an inhibitor of a Hedgehog signaling pathway, or an inhibitor of a pathway which is a target of the Hedgehog signaling pathway in the prep. of a medicament for treatment of epithelial cell hyperplasia, fibrosis of tissue, inflammation, cancer or an immune disorder. Also a transgenic animal or cell line capable of expressing a component or an inhibitor of a hedgehog signaling pathway or a target pathway of the hedgehog signaling pathway.

IT 4449-51-8, Cyclopamine
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (therapeutic use of inhibitor of hedgehog protein or hedgehog-related signaling pathway and transgenic animal or cell line expressing component or inhibitor of these pathways)

RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

REFERENCE COUNT:
REFERENCE(S):

- 8
 (1) Deutsches Krebsforschungszentrum Stiftung Des
 Offentlichen Rechts; WO 9922000 A 1999 CAPLUS
 (2) Fujita, E; BIOCHEMICAL AND BIOPHYSICAL RESEARCH
 COMMUNICATIONS 1997, V238(2), P658 CAPLUS
 (3) Johns Hopkins/University School Of Medicine; WO
 9952534 A 1999 CAPLUS
 (4) Kabushiki Kaisha Hayashibara Seibutsu Kagaku
 Kenkyujo; EP 0874048 A 1998 CAPLUS
 (5) Murone, M; CURRENT BIOLOGY 1999, V9(2), P76

CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2001 ACS

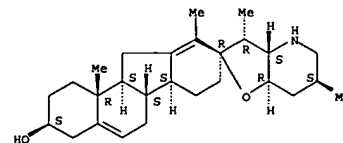
ACCESSION NUMBER: 2000:637045 CAPLUS
 DOCUMENT NUMBER: 133:344307
 TITLE: Effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine
 AUTHOR(S): Taipale, Jussel; Chen, James K.; Cooper, Michael K.; Wang, Baolin; Mann, Randall K.; Milenkovic, Ljiljana; Scotts, Matthew P.; Beachy, Philip A.
 CORPORATE SOURCE: Department of Molecular Biology and Genetics, The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA
 SOURCE: Nature (London) (2000), 406(6799), 1005-1009
 CODEN: NATUAS; ISSN: 0028-0836
 PUBLISHER: Nature Publishing Group
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Basal cell carcinoma, medulloblastoma, rhabdomyosarcoma and other human tumors are assoc. with mutations that activate the proto-oncogene Smoothened (SMO) or that inactivate the tumor suppressor Patched (PTCH). Smoothened and Patched mediate the cellular response to the Hedgehog (Hh) secreted protein signal, and oncogenic mutations affecting these proteins cause excess activity of the Hh response pathway. Here we show that the plant-derived teratogen cyclopamine, which inhibits the Hh response, is a potential 'mechanism-based' therapeutic agent for treatment of these tumors. We show that cyclopamine or synthetic derivs. with improved potency block activation of the Hh response pathway and abnormal cell growth assoc. with both types of oncogenic mutation. Our results also indicate that cyclopamine may act by influencing the balance between active and inactive forms of Smoothened.

IT 4449-51-8, Cyclopamine
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine)

RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT:
REFERENCE(S):

- 29
 (1) Aza-Blanc, P; Cell 1997, V89, P1043 CAPLUS
 (2) Beachy, P; Spring Harb Symp Quant Biol 1997, V62, P191 CAPLUS
 (3) Bond, R; Nature 1995, V374, P272 CAPLUS
 (4) Boudreau, H; Curr Opin Cell Biol 1997, V9, P134 CAPLUS

09/708,974

L8 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)
(5) Chen, C; Cell 1999, V98, P305 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:493313 CAPLUS
DOCUMENT NUMBER: 133:99549
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, ES, SE, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GN, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6291516 B1 20010918 US 1999-417564 19991014
EP 1143961 A2 20011017 EP 2000-906910 20000113

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

US 2001034337 A1 20011025 US 2001-867311 20010529

PRIORITY APPLN. INFO.:
US 1999-115642 P 19990113
US 1999-119594 P 19990210
US 1999-142124 P 19990702
US 1999-417564 A 19991014
WO 2000-US873 W 20000113

OTHER SOURCE(S): MARPAT 133:99549

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a CAMP analog, adenylate cyclase agonist, or CAMP phosphodiesterase inhibitor, regulate CAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

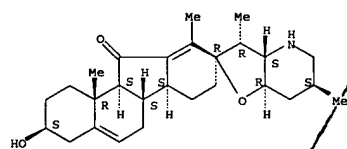
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); THU

L8 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)
(Therapeutic use); BIOL (Biological study); USES (Uses)
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

RN 469-59-0 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

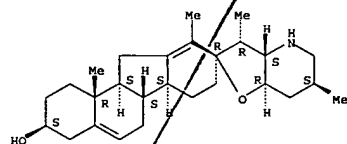
Absolute stereochemistry.



RN 4449-51-8 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:38438 CAPLUS
DOCUMENT NUMBER: 132:202865
TITLE: Effects of Veratrum nigrum alkaloids on central catecholaminergic neurons of renal hypertensive rats
AUTHOR(S): Li, Hua; Gao, Guang-You; Li, Shu-Yuan
CORPORATE SOURCE: Department of Pharmacology, Dalian Medical University,
Dalian, 116027, Peop. Rep. China
SOURCE: Acta Pharmacol. Sin. (2000), 21(1), 23-28
CODEN: APSQ55
PUBLISHER: Science Press
DOCUMENT TYPE: Journal
LANGUAGE: English

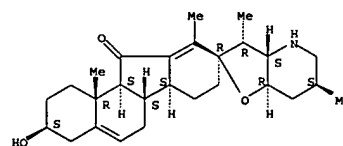
AB Aim: To study the central hypotensive mechanism of Veratrum nigrum L var ussuriense Nakai alkaloids (VnA) in renal hypertensive rats (RHR). Methods: The quant. method of immunocytochem. (ICC) was used to observe and detect the effect of VnA (30 mu.g cntdot.kg-1, iv) on activity of central catecholaminergic (CA) neurons of C1, C2, A1, and A5 areas in RHR. Results: VnA increased the immunoreactivity (IR) of tyrosine 3-monooxygenase (TM)-immunopos. (IP) neurons of C1, C2, and A5 areas in RHR extpl. group compared with RHR control group [pos. units: (1.9+-0.4), (1.18+-0.23), (1.2+-0.4) vs (0.15+-0.22), (0.31+-0.16), (0.69+-0.20), resp.]; IR of TM-IP neurons of C1 and C2 areas in RHR control group was decreased compared with sham-operated group [pos. units: (0.15+-0.22), (0.31+-0.16) vs (1.45+-0.29), (1.36+-0.25), resp.]. Conclusion: VnA increased the activity of central CA neurons in RHR to exert its hypotensive effect.

IT 469-59-0, Jervine
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Veratrum nigrum alkaloids effect on central catecholaminergic neurons in renal hypertension)

RN 469-59-0 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13
REFERENCE(S):
(1) Jin, G; Prog Physiol Sci 1985, V16, P306 CAPLUS
(2) Li, S; Chin Pharm J 1997, V32, P407 CAPLUS
(5) Ma, L; Chin Trad Herb Drugs 1998, V29, P105

CAPLUS

09/708,974

L8 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)
(7) Sun, M; Brain Res 1986, V368, P1 CAPLUS
(8) Tezuka, Y; J Nat Prod 1998, V61, P1397 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

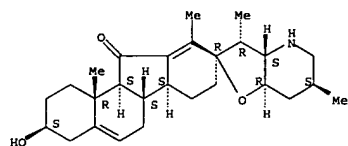
L8 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:672583 CAPLUS
DOCUMENT NUMBER: 131:267077
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey
PATENT ASSIGNER(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PTKD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RM:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
NU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRIORITY APPL. INFO.:			US 1998-81186	P 19980409
			US 1998-81263	P 19980409
			US 1998-90622	A 19980604
			WO 1999-US7811	W 19990409

OTHER SOURCE(S): MARPAT 131:267077
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

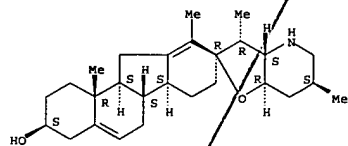
Absolute stereochemistry.

L8 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:
REFERENCE(S):

- (1) Aruba, EP 0020029 A 1980 CAPLUS
 - (2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
 - (4) Sanwa Shiyoyaku KK; JP 04230696 A 1992 CAPLUS
 - (5) Schramm, G; US 3673175 A 1972 CAPLUS
 - (6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:639750 CAPLUS
DOCUMENT NUMBER: 131:331613
TITLE: A looking glass perspective: thalidomide and cyclopamine
AUTHOR(S): Gaffield, William; Incardona, John P.; Kapur, Raj P.; Roelink, Henk
CORPORATE SOURCE: Western Regional Research Center, ARS, USDA, Albany, CA, 94710, USA
SOURCE: Cell. Mol. Biol. (Paris) (1999), 45(5), 579-588
CODEN: CMOREF; ISSN: 0145-5680
PUBLISHER: C.M.B. Association
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

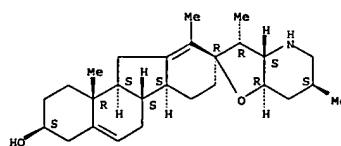
AB A review with many refs. Numerous naturally-occurring and synthetic compds. that were discovered initially because of their toxic properties, were later shown to possess biol. activities beneficial to humans that enabled them to serve as templates for the development of useful medicinal agents. A prominent example is thalidomide, a synthetic drug that gained notoriety originally due to its catastrophic teratogenicity in humans. The discovery of thalidomide's efficacy in treating several diseases has resulted in the recrudescence of the drug to society's usage. A current example of this phenomenon is the plant teratogen cyclopamine (11-deoxojervine), whose deleterious terata-inducing effects were restricted to grazing animals, but whose recently discovered inhibition

of Sonic hedgehog signal transduction has provided both the potential to increase our understanding of organogenesis and to serve as a lead compd. in drug development.

IT 4449-51-8, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thalidomide and cyclopamine)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:
REFERENCE(S):

- (1) Beachy, P; Cold Spring Harb Symp quant Biol 1997, V62, P191 CAPLUS
- (2) Berressem, P; Chem Brit 1999, V35, P40 CAPLUS
- (3) Blaschke, G; Arznei-Forsch/Drug Res 1979, V29,

09/708,974

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09/708,974

L9 ANSWER 1 OF 5 USPATFULL

ACCESSION NUMBER: 2001:165614 USPATFULL
TITLE: Stem cells and their use in transplantation
INVENTOR(S): Moss, Peter Ian, London, Great Britain
Walters, David Martin, London, Great Britain
Pointer, Graham, London, Great Britain

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001024824	A1	20010927
APPLICATION INFO.:	US 2000-731255	A1	20001206 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169082	19991206 (60)
	US 2000-215109	20000628 (60)
	US 2000-238880	20001006 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108

NUMBER OF CLAIMS: 127
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2446

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and compositions are described for the treatment of type 1 insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for

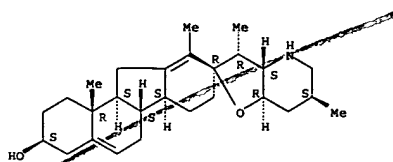
a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogeneically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT 4449-51-8, Cyclopamine
(isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)

RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4'a,5,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 1 OF 5 USPATFULL (Continued)



L9 ANSWER 2 OF 5 USPATFULL

ACCESSION NUMBER: 2001:158338 USPATFULL
TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
Ji, Benxiu, Sharon, MA, United States
PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6291516	B1	20010918
APPLICATION INFO.:	US 1999-417564		19991014 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-115642	19990113 (60)
	US 1999-119594	19990210 (60)
	US 1999-142124	19990702 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Krass, Frederick
LEGAL REPRESENTATIVE: Vincent, Matthew P., Halstead, David P. Ropes & Gray

NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Figure(s); 19 Drawing Page(s)
LINE COUNT: 3730

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened

or hedgehog activity. The present invention further makes available methods

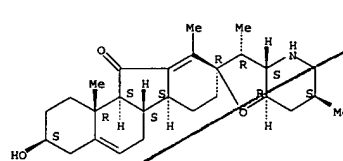
and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the in certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT 469-59-0, Jervine/4449-51-8, Cyclopamine
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4'a,5,5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

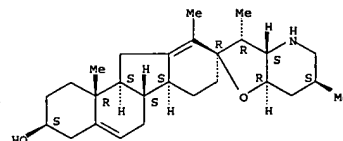
Absolute stereochemistry.

L9 ANSWER 2 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4'a,5,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

L9 ANSWER 3 OF 5 USPATFULL
 ACCESSION NUMBER: 2001:152946 USPATFULL
 TITLE: Cholesterol and hedgehog signaling
 INVENTOR(S): Beachy, Philip A., Baltimore, MD, United States
 Porter, Jeffrey A., Belmont, MA, United States
 Cooper, Michael K., Baltimore, MD, United States
 The Johns Hopkins University School of Medicine,
 Baltimore, MD, United States (U.S. corporation)

NUMBER	KIND	DATE
US 6288048	B1	20010911
US 19990212	(9)	19990212

PATENT INFORMATION: US 6288048
 APPLICATION INFO.: US 19990212 (9)

NUMBER	DATE
US 1998-74714	19980213 (60)

PRIORITY INFORMATION: US 1998-74714 19980213 (60)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: GRANTED
 PRIMARY EXAMINER: Krass, Frederick
 LEGAL REPRESENTATIVE: Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
 NUMBER OF CLAIMS: 3
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 11 Drawing Figure(s); 7 Drawing Page(s)
 LINE COUNT: 1222

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol

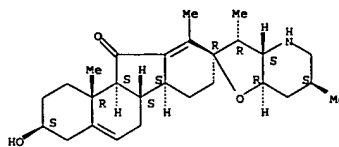
modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition or stimulation of cholesterol biosynthesis or transport.

IT 469-59-0, Jervine (cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 3 OF 5 USPATFULL (Continued)



L9 ANSWER 4 OF 5 USPATFULL
 ACCESSION NUMBER: 2000:67202 USPATFULL
 TITLE: Method and apparatus for conditioning gas for medical procedures having humidity monitoring and recharge alert
 INVENTOR(S): Ott, Douglas E., 682 Foster Rd., Macon, GA, United States 31210
 Schaefer, John F., Macon, GA, United States
 Gray, Robert I., Macon, GA, United States
 Ott, Douglas E., Macon, GA, United States (U.S. individual)

NUMBER	KIND	DATE
US 6068609		20000530
US 1998-81186		19980519 (9)

PATENT INFORMATION: US 6068609 20000530
 APPLICATION INFO.: US 1998-81186 19980519 (9)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Bockelman, Mark
 ASSISTANT EXAMINER: Thompson, Michael M
 LEGAL REPRESENTATIVE: Needle & Rosenberg, P.C.
 NUMBER OF CLAIMS: 42
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)
 LINE COUNT: 99

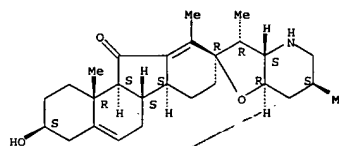
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB An apparatus for conditioning gas for use in a medical procedure, such as endoscopy, the gas being received into the apparatus from a gas source. The apparatus comprises a housing defining a chamber having an entry port and an exit port. A humidification means comprising at least one water-retainer layer is disposed within the chamber in the path of travel of the gas for humidifying the gas as it passes through the chamber. A humidity sensor is disposed within the chamber that senses the humidity of the gas exiting the chamber. A monitoring circuit is connected to the humidity sensor that detects when the chamber requires a recharge of liquid based on the humidity of the gas in the chamber, and generates a recharge signal indicative thereof. A charging port on the housing provides access into the chamber to recharge the chamber with water. A heating element and temperature sensor are also disposed within the chamber. A control circuit further regulates the temperature of the gas exiting the chamber.

IT 469-59-0, Jervine 4449-51-8/ Cyclopamine (use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

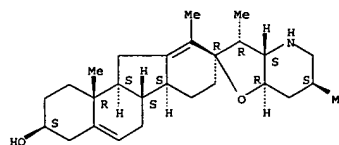
Absolute stereochemistry.

L9 ANSWER 4 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

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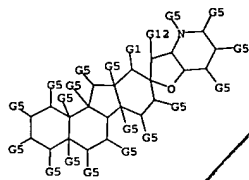
L11 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS
ACCESSION NUMBER: 134:295995 MARPAT
TITLE: Synthesis, compositions and uses of steroidal
alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:
US 1999-159215 19991013
US 2000-229273 20000830

AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.

MSTR 8



MPL: claim 7
NTE: or unsaturated forms, and/or seco-, nor- or homo-derivatives
NTE: additional substitution and ring formation also claimed

L11 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS
ACCESSION NUMBER: 133:29549 MARPAT
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:
US 6291516 B1 20010918 US 1999-417564 19991014
EP 1143961 A2 20011017 EP 2000-909510 20000113

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

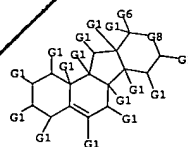
US 2001034337 A1 20011025 US 2001-867311 20010529
US 1999-115642 19990113
US 1999-119594 19990210
US 1999-142124 19990702
US 1999-417564 19991014
WO 2000-US873 20000113

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.

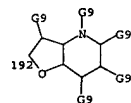
MSTR 18

L11 ANSWER 1 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)

L11 ANSWER 2 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)



G8 = 192



MPL: claim 5
NTE: substitution is restricted

L11 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 131:267077 MARPAT
 TITLE: Use of steroidal alkaloid derivatives as inhibitors
 of hedgehog signaling pathways
 INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter,
 Jeffrey
 PATENT ASSIGNEE(S): A.
 Johns Hopkins University School of Medicine, USA
 SOURCE: PCT Int. Appl., 136 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

L11 ANSWER 3 OF 3 MARPAT COPYRIGHT 2001 ACS (Continued)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MW, MX, MY, NZ, PL, PT, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ZA, ZM, ZY, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CU, CV, CW, CX, CY, CZ, DA, DB, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.				

MPL: claim 3

REFERENCE COUNT:
REFERENCE(S):

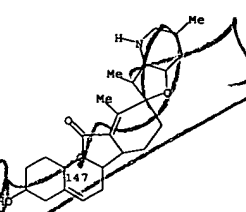
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 (1) Aruba; EP 0020029 A 1980 CAPLUS
 (2) Cura Nominees Pty Ltd; WO 9110743 A 1991 CAPLUS
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 (6) Smithkline Beecham Co; EP 0375349 A 1990 CAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

PRIORITY APPLN. INFO.:
 AU 9934860 A1 19991101 AU 1999-34860 19990409
 EP 1067939 A1 20000117 EP 1999-916563 19990409
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, LT, LV, FI, RO
 US 1998-81186 19980409
 US 1998-81263 19980409
 US 1998-90622 19980604
 WO 1999-US7811 19990409
 AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.

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G4—G1

G1 - 147



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L13 ANSWER 1 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:449755 CAPIUS
 DOCUMENT NUMBER: 65:49755
 ORIGINAL REFERENCE NO.: 65:93438-f
 TITLE: Isolation and identification of alkaloids from *Veratrum lobelianum*. I
 AUTHOR(S): Shinkarenko, A. L.; Bondarenko, N. V.
 CORPORATE SOURCE: Pharm. Inst., Pyatigorsk
 SOURCE: Rast. Resuray (1966), 2(1), 45-50
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian

AB The total amt. of alkaloids in the plants from Northern Caucasus at 1217-2000 m. above sea level was 0.23-1.4 in the leaves, 0.6-1.86 in the roots, and 0.09-1.41% in the stalks, during vegetation, blooming, and fruiting. The ether was replaced by CHCl₃ in Poethke gravimetric method (CA 31, 81107). The presence of 16 individual substances, with pos. Dragendorff test, was established in the CHCl₃ ext. by formamide paper chromatography, with CHCl₃, CHCl₃-C₆H₆, and CHCl₃-dioxane as solvents. Jervine, by Poethke method, and germinine, by chromatography, were isolated and identified. At altitudes of 1800 to 2000 m., the alkaloid content was generally higher. 27 references.

L13 ANSWER 2 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:449754 CAPIUS
 DOCUMENT NUMBER: 65:49754
 ORIGINAL REFERENCE NO.: 65:93438-g
 TITLE: Mineral nutrient studies in sugarcane
 AUTHOR(S): Bishop, R. T.
 SOURCE: Proc. Ann. Conf. S. African Sugar Technologists' Assoc. (1965), 39, 128-33
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The abs. amts. of N, P, K, Ca, Mg, and Na in the aboveground portions of the plant were noted during maturation. The correlation coeffs. between concns. of nutrients (N, P, K, Ca, Mg, Na, Cu, and Mn) in the third leaf blade and environmental factors (rainfall, soil moisture, stalk increment, air temp., total radiation, evapn., and soil temp.) are presented. The effect of the age of the crop on concn. of nutrients in third leaf blades is considered.

L13 ANSWER 3 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:414987 CAPIUS
 DOCUMENT NUMBER: 65:14987
 ORIGINAL REFERENCE NO.: 65:28133-c
 TITLE: Teratogenic compounds of *Veratrum californicum* (Durand). I. Preparation and characterization of fractions and alkaloids. I. Biologic testing
 AUTHOR(S): Keeler, Richard F.; Singer, Wayne
 CORPORATE SOURCE: Animal Disease Parasite Res. Div., U.S. Dept. of Agr., Ames, Iowa
 SOURCE: Can. J. Biochem. (1966), 44(6), 819-28
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The isolation and identification of 4 known alkaloids (jervine, veratrosine, pseudojervine, and isorubijervine) was achieved from teratogenic fractions of *V. californicum*. Two addnl. alkaloids, not previously reported and designated alkaloids X and V, were also isolated from these fractions and partially characterized.

L13 ANSWER 4 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:414986 CAPIUS
 DOCUMENT NUMBER: 65:14986
 ORIGINAL REFERENCE NO.: 65:28133-f-h, 28133a-b
 TITLE: Mechanism for bradycardia induced by acute systemic anoxia in the dog
 AUTHOR(S): Litwin, J.; Skolassinska, K.
 CORPORATE SOURCE: School Med., Warsaw
 SOURCE: Arch. Ges. Physiol. (1966), 289(2), 109-21
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Studies on acute systemic anoxia were carried out on 46 heparinized, chloralose-anesthetized mongrel dogs weighing 9.5-20.0 kg., some of which were allowed to breathe spontaneously, others were artificially ventilated, tubocurarine.HCl 0.1 mg./kg. body wt., being administered intravenously to block the neuromuscular transmission. The artificially ventilated animals were divided into a closed- and an open-chest group. All animals exhibited a biphasic response of the heart, consisting of a primary tachycardia and a secondary bradycardia; the latter was marked

and amounted to 45.8 and 67.2% redn. of heart rate in artificially ventilated and in spontaneously breathing animals, resp. The primary tachycardia

was usually more distinct in spontaneously breathing animals as compared to those in which the respiration was controlled. Since bilateral vagotomy, atropinization, and ganglionic blockade considerably reduced the

intensity of bradycardia and, in some cases, abolished it completely, it appeared that anoxic bradycardia was due mainly to an increased tone of the vagal cardioinhibitory center. Moderate slowing of the heart, which persisted in some expts., following vagotomy, atropinization, and ganglionic blockade, appeared to be the outcome of the local depressant action of severe anoxia on the heart itself, but the local action of anoxia was

only of secondary importance as compared to the nervous vagal mechanism. On the other hand, spinal-cord destruction and bilateral adrenalectomy both caused a significant enhancement of secondary anoxic bradycardia, indicating that a strong stimulation of the sympatho-adrenal system occurred throughout the anoxia, resulting in primary tachycardia and, in later stages of anoxia, opposing vagal slowing of the heart. A very marked exaggeration of bradycardia after adrenalectomy alone proved that increased release of catechol amines from the adrenal medulla was of paramount importance in this regard. Anoxic bradycardia did not result from stimulation of either baro- or chemoreceptors in the sino-aortic arch; some other mechanism, gave rise to the increased vagal discharge to the heart accounting for the anoxic bradycardia and constituted the principal factor responsible for cardiac slowing in anoxia; the reflexes from carotid and aortic receptors appeared to be of secondary importance. Such a mechanism may consist either in a reflex initiated at some unidentified receptors or in a central stimulating effect of anoxia on vagal cardioinhibitory neurons.

L13 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:68045 CAPLUS
 DOCUMENT NUMBER: 64:68045
 ORIGINAL REFERENCE NO.: 64:12744a-f
 TITLE: Lycopodium alkaloids. XVII. Mass spectra of annotine and some annotine derivatives
 AUTHOR(S): MacLean, D. B.; Curcummelli-Rodostamo, M.
 CORPORATE SOURCE: McMaster Univ., Hamilton
 SOURCE: Can. J. Chem. (1966), 44(5), 611-20
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The mass spectra of annotine and some of its deriva. are recorded and discussed. Fragmentation mechanisms are proposed to account for the formation of the major peaks in the spectra. The compn. of the ions has been verified by measurement of the high-resolution spectra of 4 of the 5 compds. The results lend support to the structure previously proposed for this alkaloid.

L13 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:498716 CAPLUS
 DOCUMENT NUMBER: 63:98716
 ORIGINAL REFERENCE NO.: 63:18209b,18210a-c
 TITLE: C-N or D-homoosteroids and related alkaloids. IV. 11-Deoxojervine, a new alkaloid from Veratrum species
 AUTHOR(S): Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Murai, Akio; Ohuchi, Shigehiro; Sato, Norio; Katsui, Nobukatsu
 CORPORATE SOURCE: Hokkaido Univ., Sapporo
 SOURCE: Bull. Chem. Soc. Japan (1965), 38(8), 1374-8
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB cf. CA 62, 14774c. The benzene exts. of alkalized, ground roots of Veratrum album var glandiflorum subjected to sepn. by a modified Jacobs' procedure (cf. Stoll, et al., CA 50, 10748g), gave 11-deoxojervine (I) probably identical with Takaoka's sterol (Nippon Kagaku Zasshi 60, 1090(1939)), veratramine (II), rubijervine, solanidine, and .beta.-sitosterol. I ([.alpha.].23D -44.2.degree.) m. 236-8.degree. (MeOH) (crystals contained solvent); on drying at the b.p. of xylene, the m.p. changed to 237-8.degree. and the ir spectrum also changed. Acetylation of 101 mg. I with 1 ml. Ac2O and 1 ml. pyridine at 100.degree. gave 84 mg. 3-N-diacetyl-11-deoxojervine (III). III, recrystd. from aq. alc., m. 168-4.degree. (crystals contained solvent), resolidified and again m. 195-7.degree.; III dried at the b.p. of xylene m. 195-7.degree. and had [.alpha.].23D 1.1.degree.. Attempted redn. of I with LiAlH4 or Li in liquid NH3 gave quant. recovery of I. I (220 mg.) in 50 ml. MeOH treated with 3.1 ml. concd. H2SO4 and 55 mg. Fe2(SO4)3 in the cold, and the mixt. stirred 5 hrs. at room temp. gave 10 mg. II. WolffKishner redn. of 5 g. jervine according to Barton's procedure (B., et al., CA 49, 12505e) gave 1.1 g. I, and 0.45 g. conjugated diene (IV), m. 211-13.degree.. [.alpha.].23D, 3.5.degree. when recrystd. from Me2CO or MeOH. Acetylation of 77 mg. IV with Ac2O-pyridine at 100.degree. gave 48 mg. O,O,N-triacetyl deriv., m. 116-18.degree.. [.alpha.].23D 45.degree. after recrystn. from MeOH-EtOH. On the basis of these facts and of the ir, uv, and N.M.R. spectra, the structure shown for IV is suggested. Jervine-11.beta.-ol (507 mg.) in 500 ml. boiling BuOH treated over 5 hrs. with 36 g. Na, and the mixt. refluxed an addnl. 1.5 hrs., gave 83 mg. IV, which formed the expected triacetyl deriv. (m. 120-1.degree.). Direct transformation of I into II supports the .alpha.-configuration of the H on C-9. The ir, uv, and N.M.R. spectra of many of the compds. are given.

L13 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:498715 CAPLUS
 DOCUMENT NUMBER: 63:98715
 ORIGINAL REFERENCE NO.: 63:18208c-h,18209a-h
 TITLE: Reactions of epoxides. VII. Acid-catalyzed reactions of 13,17a-epoxy- and 17a,18-epoxy-C-nor-D-homospirostan
 AUTHOR(S): Coxon, J. M.; Hartshorn, M. P.; Kirk, D. N.
 CORPORATE SOURCE: Univ. Canterbury, Christchurch, N. Z.
 SOURCE: Tetrahedron (1965), 21(9), 2489-99
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB cf. CA 63, 8447c. C-Nor-D-homo-13(17a)-olefin (I, 500 mg.) in 80 ml. dioxane treated with 0.1M aq. HOBr 40 min. at 20.degree. and the dil. mixt. filtered gave 480 mg. bromohydrin (II, R : Br) (III), m. 130-1.degree. (ligroine), [.alpha.].D -36.degree. (C 0.5). III (135 mg.) in 10 ml. alc. kept 18 hrs. at 20.degree. with 150 mg. KOH gave 80 mg. 3.beta.-hydroxy-13.alpha.-17.alpha.-epoxide, m. 215-18.degree., converted by acylation with 1:10 Ac2O-C5H5N in 16 hrs. to 3.beta.-acetoxy-13.alpha.-17.alpha.-epoxide (IV), m. 194-6.degree.. II (R : OH) (V, 3 g.) in 25 ml. C5H5N treated dropwise at 0.degree. with 2.5 ml. SOCl2 and the dild. mixt. extd. with Et2O gave the 13.beta.,17a.beta.-epoxide (VI), m. 187.5-9.0.degree.. Since V is readily obtained by acid-catalyzed hydrolysis of the mixed .alpha.- and .beta.-epoxides IV and VI, formed by epoxidation of I, the tedious chromatographic sepn. to produce IV and VI can be avoided. The ready availability of the tetrasubstituted epoxides led to their inclusion in studies of BF3-catalyzed rearrangements. IV (1 g.) in 100 ml. anhyd. C6H6 treated 30 sec. with 1 ml. BF3-Et2O and dild. with Et2O, the washed soln. evapd. and chromatographed on 80 g. Al2O3, eluted with 8:1 ligroine-C6H6 and the eluate (333 mg.) crystd. from C5H12 and MeOH gave the 8(14), 13(17a)-diene (VII), m. 160-2.degree.. [.alpha.].D -62.degree. (c 1.17). Elution with 1:1 ligroine-C6H6 gave 300 mg. gum (VIII), [.alpha.].D -53.degree. (C 1.33). Further elution with C6H6 gave 180 mg. hecogenin acetate, m. 250-2.degree. (MeOH), [.alpha.].D -7.degree., and final elution with Et2O gave the fluorohydrin II (R : F) (IX), m. 176-7.degree. (C6H14), [.alpha.].D -62.degree. (c 0.73). VIII (175 g.) treated with 0.5 ml. BzH in 10 ml. alc. contg. 60 mg. KOH 18 hrs. at 20.degree. and the product isolated with Et2O, chromatographed on Al2O3, and elated with C6H6 gave 143 mg. 13-acetyl-C-nor compd. (X) benzylidene deriv., [.alpha.].D -38.degree. (c 0.93). Elution with Et2O gave 29 mg. 3.beta.-hydroxy-C-nor-D-homo-17a ketone (XI), [.alpha.].D -42.degree. (C 1.12). IX (100 mg.) and 100 mg. KOH heated under reflux 4 hrs. in 25 ml. 90% aq. alc. gave the 3.beta.-hydroxy-13.alpha.-17a.alpha.-oxide, acetylated to IV. IV (800 mg.) and 0.8 ml. BF3-Et2O kept 1 hr. in 80 ml. anhyd. Et2O gave 646 mg. IX. IX (140 mg.) and 0.16 ml. BF3-Et2O kept 22 min. in 16 ml. C6H6 gave material, lambda. 251 m.mu. (epsilon. 3200) contg. 14% diene VII. Crytyn. from MeOH gave 20 mg. hecogenin acetate, and chromatography of the residues on Al2O3 gave a ketonic fraction consisting mainly of X and unreacted IX. VI (500 mg.) in 50 ml. dry C6H6 treated 3 min. with 0.5 ml. BF3-Et2O and isolation of the steroidal product gave 17a.beta.-hydroxy-17a.alpha.-methyl-.DELTA.8(14)-olefin (XII), m. 170-1.degree. (MeOH), [.alpha.].D -94.degree. (c 1.03), deep yellow color with C(NO2)4, dehydrated with SOCl2-C5H5N to VII, thus supporting the trans-13.alpha.,17a.beta.-configuration of XII. The reaction between VI and BF3 in Et2O gave only unreacted VI and the fluorohydrin (XIII), m. 130-7.degree. (decompn.), [.alpha.].D -50.degree. (c 0.96), hydrolyzed to the 3.beta.-hydroxy-13.beta.,17a.beta.-epoxide, m. 128-40.degree.. [.alpha.].D -60.5.degree., acetylated to VI. Earlier work

L13 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)

(CA 63, 7081e) 18, (759)(1965)) made available two 17a,18-epoxides (XIV, XV) and their behavior with BF3 and with aq. HClO4 was examd. XIV (1.3 g.) and 1.3 ml. BF3-Et2O kept 15 min. in 130 ml. C6H6 and the products isolated gave 60% 18-aldehyde (XVI), m. 186-8.degree., [.alpha.].D -63.degree. (c 0.92), not epimerized by base and thus confirming the .alpha.-configuration of the CHO group. Two unidentified minor products, m. 167-73.degree., [.alpha.].D -46.degree. (c 1.22); and m. 187-90.degree., [.alpha.].D -9.degree. (c 1.0), and XVI were also isolated by chromatography in 210, 210, and 330 mg. amts. Rearrangement of XIV with HClO4 in aq. dioxane 10 min. at 20.degree. gave 83% XVI, together with 18-hydroxy-13(17a).DELTA.-olefin (XVII, R : H, OH) (XVIII), m. 204-6.degree., [.alpha.].D -64.degree. (c 1.28), acetylated to XVII (R : OAc), m. 159-63.degree., [.alpha.].D -48.degree. (c 0.87), reduced in turn by Li-EtNH2 to the endocyclic olefin I. The behavior of XV with BF3 was very unusual. XV (2.3 g.) in 230 ml. C6H6 treated 30 sec. with 2.3 ml. BF3-Et2O and the isolated product adsorbed on 80 g. Al2O3, eluted with 1:1 ligroine-C6H6 and the gum (1.5 g.) crystd. from MeOH gave the cyclic ether (XIX), m. 209-10.degree., [.alpha.].D -62.5.degree. (c 0.83). Elution with C6H6 gave the fluorohydrin (XX, R : F) (XXI), m. 206-9.degree., [.alpha.].D -64.degree. (c 1.0); 3,18-diacetate, [.alpha.].D -55.degree. (c 1.18); 3 acetate 18-benzoate, [.alpha.].D -52.degree. (c 0.87). XXI (50 mg.), 50 mg. KOH, and 10 ml. aq. alc. refluxed 2 hrs. gave the 3-hydroxy fluorohydrin, m. 258-9.degree. (MeOH), [.alpha.].D -63.degree. (c 0.77). The XX residues (398 g.) in 5 ml. dioxane treated 18 hrs. at 20.degree. with 400 mg. 2,3-dichloro-5,6-dicyanobenzoquinone and the mixt. poured into Et2O, the NaOH-washed soln. evapd., and the residue adsorbed on 40 g. Al2O3, eluted with C6H6-Et2O and the eluate (90 mg.) crystd. from MeOH gave the aldehyde (XVII, R : O), m. 197-9.degree., [.alpha.].D -41.degree. (c 0.98). Further elution with Et2O gave more XXI (total yield 590 mg.). XV (1.97 g.) in 200 ml. Et2O treated 90 min. with 2 ml. BF3-Et2O and chromatographic sepn. of the products gave XVIII and XIX in 1.17 g. and 769 mg. yields, resp. Treatment of 500 mg. XV in 16 ml. CH2Cl2 and 32 ml. Me2CO with 0.5 ml. 1.5M aq. HClO4 for 10 min. at 20.degree. gave 332 mg. XVIII. Although the results shed no light on the configuration of the 17a,18-diol (XX, R : OH) (XXII), m. 126-8.degree. (C6H14), [.alpha.].D -33.degree. (c 1.132), obtained previously (CA 49, 9685h) by the action of OsO4 in C5H5N in C6H6-dioxane on the 17a(18)-olefin. Acetylation of XXII gave the 3.beta.,18-diacetate, m. 218-10.degree., [.alpha.].D -22.degree. (c 0.90), hydrolyzed by KOH in aq. alc. to XV. The 18-acetate (200 mg.) in 10 ml. pyridine was treated at -40.degree. with 0.2 ml. SOCl2, the reaction mixt. poured into H2O, and the product extd. with pentane and chromatographed over deactivated Al2O3 to give 158 mg. XXIII, oil, [.alpha.].D -60.degree. (c 1.54). The 18-aldehyde (XVI) (250 mg.) and 1.5 ml. 60% N2H4.H2O heated 1 hr. at 120.degree. in HOCH2CH2OH and the mixt. heated (N atm.) to 200.degree. with 1 g. KOH and kept 2 hrs. at 200.degree., extd. with EtO and the isolated product acetylated gave the 17a.alpha.-methyl deriv. (XXIV, 17a.alpha.-Me), m. 154-5.degree. (MeOH), [.alpha.].D -60.degree. (c 0.85). The 17a(18)-olefin (250 mg.) in 10 ml. AcOH hydrogenated 7 hrs. over 150 mg. 10% Pd-C and the product crysd.

L13 ANSWER 11 OF 34 CAPIJUS COPYRIGHT 2001 ACS (Continued)
 from MeOH gave 222 mg. XXIV (17a. β .-Me), m. 175-6.degree., [α]_D
 -49.5.degree. (c 1.07). The 18-Me signals in XXIV are split into
 doublets
 by spin-spin coupling with the 17a proton and appear in a region contg.
 19-Me and 27-Me signals. The tabulated τ . values are to be regarded
 as tentative.

L13 ANSWER 12 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1965:439307 CAPIJUS
 DOCUMENT NUMBER: 63:39307
 ORIGINAL REFERENCE NO.: 63:7066a-c
 TITLE: Lysergic acids
 INVENTOR(S): Hofmann, Albert; Troxler, Franz
 PATENT ASSIGNEE(S): Sandoz Ltd.
 SOURCE: 3 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 386440		19650415	CH	19600819

AB Substituted lysergic acids and dihydrolysergic acids are prepd. by sapon.
 of the corresponding carboxylic acid amides. Thus, 9.5 g.
 1-methyl-dihydroergocryptine in 240 cc. EtOH was refluxed with 240 cc. 4N
 KOH in 50% MeOH for 20 hrs. to give 1-methyl-dihydro-d-lysergic acid,
 which
 was purified by dissolving in 10% methanesulfonic acid, filtering, and
 neutralizing. The pure product m. 335.degree., [α]_D20D -111 +-
 20.0.degree. (c 0.05, pyridine). Similarly was prep. from
 1-methyl-d-lysergic acid D-2-propanolamide a mixt. of 1-methyl-d-lysergic
 acid and 1-methyl-d-isolysergic acid (I) which was sepd. by soln. in
 concd. NH₃ soln. and filtration through talc. The ammonium salt of I
 crystd., and was dissolved in water and treated with AcOH to obtain pure
 I, m. 215.degree., [α]_D20D 330 +- 10.degree. (c 0.2, MeOH). From
 1-benzyl-dihydroergocryptine was prepd. 1-benzyl-9,10-dihydro-D-lysergic
 acid, m. 217-22.degree., [α]_D20D -106.degree. (c 0.5, pyridine).

L13 ANSWER 13 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1965:439306 CAPIJUS
 DOCUMENT NUMBER: 63:39306
 ORIGINAL REFERENCE NO.: 63:7065c,7066a
 TITLE: The structure of complex organic molecules by direct
 x-ray analysis
 AUTHOR(S): Robertson, J. Monteath
 CORPORATE SOURCE: Univ. Glasgow, UK
 SOURCE: Proc. Robert A. Welch Found. Conf. Chem. Res. (1960),
 4, 135-56, discussion 157-62
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A lecture on the structure of limonin, calycanthine, and echitamine.

L13 ANSWER 14 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1965:91207 CAPIJUS
 DOCUMENT NUMBER: 62:91207
 ORIGINAL REFERENCE NO.: 62:16328g-h,16329a-g
 TITLE: Jervine. XV. Hydrogenation of the 13,17a-double bond
 AUTHOR(S): Wintersteiner, O.; Moore, M.
 CORPORATE SOURCE: Squibb Inst. Med. Res., New Brunswick, NJ
 SOURCE: Tetrahedron (1965), 21(4), 779-90
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB cf. CA 62, 9200f. N-Acetyltetrahydroisojervine (503 mg., CA 58, 2479f)
 in
 5% KOH-MeOH refluxed (N atm.) 1 hr. and the H₂O-washed product recrystd.
 from MeOH-EtOAc gave 364 mg. α . β .-unsatd. ketone (I, R = H)
 (II), m. 276-9.degree., [α]_D22D -12.7.degree. (c 0.883); triacetate
 (I, R = Ac) (III), m. 262-4.degree. (EtOAc-C₆H₁₄), [α]_D27D
 -27.4.degree. (c 0.948). II (149 mg.) in 15 ml. AcOH catalytically
 hydrogenated with 80 mg. prerduced PtO₂ in 5 hrs. with 1.07 mole equivs.
 H and the filtered soln. evapd. the residue kept overnight in 50% aq.
 EtOH, and the cryst. deposit recrystd. from EtOAc gave 12 mg. II,
 converted to III for identification. The residue from the combined
 mother
 liquors acetylated and recrystd. from alc. and from EtOAc-C₆H₁₄ yielded 37
 mg. impure C/D trans linked isomer (IV, R = Ac), m. 226-9.degree.,
 [α]_D22D -8.6.degree. (c 1.059, 1:1 MeOH-tetrahydrofuran), showing
 mutarotation in this solvent contg. 2% KOH from [α]_D21D 12.0 (c
 1.075) to -24.2.degree. in 23 hrs. IV contained 70% starting material
 present as III. Part of IV equilibrated in alk. soln. and the product
 crystd. from EtOAc gave pure N-acetyl deriv. (V, R = H) (VI), m.
 268-70.degree., [α]_D21D -39.degree.. Isolation of VI and the
 characteristic shape of the mutarotation curve left no doubt as to the
 identity of the hydrogenation product as IV. Accordingly the side chain
 in the parent ketone II must be β .-oriented and trans addn. to the
 double bond occurred. The formation of IV as the kinetically favored
 product was explained by the predominance of stereoelectronic over purely
 steric control of proton addn. of C-13 in the re-ketonization of an
 enolic
 intermediate arising by 1,4-addn. of H to the enone system of II. The
 observation that the hydrogenation of jervine (VII, R = R' = H,
 .DELTA.13-17a) afforded tetrahydrojervine (CA 37, 40727) by
 cis(α . α .. α ..)-addn. was confirmed, and the product characterized
 as
 diacetyltetrahydrojervine, m. 214-17.degree.. O,N-Diacetyljervine VII (R
 = R' = Ac, .DELTA.13-17a, 3.06 g.) in 300 ml. AcOH hydrogenated 22 hrs.
 with 1.54 g. prerduced Pt catalyst and the residue on evapn. of the
 filtered soln. taken up in EtOAc, dild. with C₆H₁₄ and the ppt. recrystd.
 from warm EtOAc, MeOH-EtOAc, and Me₂CO, the product (168 mg., m.
 240-4.degree.) chromatographed on Al₂O₃ and eluted in 49:1 Et₂O-MeOH
 gave
 the 3,N-diacetate (VIII), m. 240-3.degree., [α]_D28D -27.8.degree. (c
 1.148), isomeric with IV, V and the 17-epimeric dihydro deriv. (IX).
 VIII
 gave a triacetate (X), [α]_D130D -23.3.degree.. Hydrolysis of VIII by
 boiling 30 min. in 5% KOH-MeOH gave the N-acetyl deriv. (XI), m.
 220-1.degree. (EtOAc), [α]_D131D -27.3.degree. (c 0.952). Acetylation
 of XI gave an amorphous product with ir spectrum identical with that of
 X.
 Mutarotation of VIII in 1:1 MeOH-tetrahydrofuran contg. 2% KOH gave
 initial [α]_D130-1D -35.0.degree. shifting to -38.9.degree. in 5 hrs.
 (c 1.389). The mixt. yielded the N-acetyl deriv. (XI). The mother
 liquor

L13 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)
 from VIII evapd. and the residue (2.5 g.) acetylated, chromatographed and the primary eluates rechromatographed gave almost pure triacetyltetrahydroisojervine (XIII), m. 170-2.degree., [α]_D 66.3.degree. (c 1.033). Further elution with 1:1 C₆H₆-Et₂O gave IX triacetate, [α]_D 28D -14.7.degree. (CHCl₃), showing mutarotation in alk. MeOH-tetrahydrofuran, hydrolyzed in 5% KOH-MeOH to the N-Ac: deriv., m. 235-9.degree., [α]_D 25D -13.degree. (c 1.192). With O,N-diacetyljervine, the primary event in hydrogenation was the hydrogenolysis of the 17,23- ether linkage and the formation of a free 23-OH group. This may have been accompanied by deconjugation of the enone grouping leading to 3,N-diacetyltetrahydroisojervine, isolated as XIII, or followed by hydrogenation of the double bond and thus leading by trans (13.beta.,17 α .alpha.)-addn. to the 3,N-diacetate of IX and to the configurationally as yet undefined new stereoisomer VIII. These results were discussed in terms of their dependence on the ease of protonation of the 17,23-ether O and the direction of polarization of the enone system before and after cleavage of the 17-O bond.

L13 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1965:91206 CAPLUS
 DOCUMENT NUMBER: 62:91206
 ORIGINAL REFERENCE NO.: 62:161286-g
 TITLE: Nitrogen-containing steroids. X. The conversion of halohydrins to aziridines and oxazolines
 AUTHOR(S): Ponsold, Kurt; Groh, Helmut
 CORPORATE SOURCE: Univ. Jena, Germany
 SOURCE: Chem. Ber. (1965), 98(4), 1009-12
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB cf. CA 62, 10476e. 2.alpha.-Bromo-3.alpha.-cholestanol (I) (3.0 g.) in 60 cc. C₅H₅N treated 48 hrs. at 0.degree. with 2.0 cc. MeSO₂Cl yielded 3.1 g. methanesulfonate (II) of I, leaflets, m. 232-3.degree. (CHCl₃-Me₂CO), [α]_D 20D 52.degree. (c 2, CHCl₃). II (2.5 g.) in 150 cc. Me₂SO stirred 4 hrs. at 80.degree. with 7.0 g. NaN₃ gave 1.95 g. 2.alpha.-bromo-3.beta.-azidocholestanol (III), m. 84.degree. (MeOH), [α]_D 20D 10.degree. (c 2, CHCl₃). III (2.0 g.) in 16 cc. C₆H₆ and 1.1 g. Ph₃P refluxed about 0.5 hr. and evapd., and the crude triphenylphosphine dissolved in 15 cc. refluxing AcOH and refluxed 1 hr. with 5 cc. 48% HBr yielded 0.96 g. 2.alpha.-bromo-3.beta.-amincholestanol-HBr (IV.HBr), m. 285.degree. (EtOH). IV.HBr (0.5 g.) in 50 cc. boiling EtOH with 0.5 g. KOH in a little EtOH yielded 0.25 g. IV, m. 116.degree. (MeOH). III (3.0 g.) in 100 cc. AcOEt hydrogenated 2 hrs. at room temp. over 0.4 g. PtO₂ yielded 2.5 g. IV, m. 112-14.degree. (MeOH), [α]_D 20D 5.degree. (c 1, C₅H₅N). IV (0.90 g.), 1 g. KOH, and 10 cc. MeOCH₂CH₂OH refluxed 20 min. yielded 0.55 g. 2.beta.,3.beta.-imincholestanol (V), m. 104-5.degree. V (0.20 g.) in 2 cc. C₅H₅N treated 1 hr. at room temp. with 2 cc. Ac₂O yielded 0.18 g. N-Ac deriv. of V, m. 134-5.degree. (Me₂CO), [α]_D 20D 37.degree. (c 1, CHCl₃). IV (0.5 g.), 5 cc. C₅H₅N, and 5 cc. Ac₂O yielded overnight at room temp. 0.45 g. N-Ac deriv. (VI) of IV, needles, m. 199.degree. (decomp.) (Et₂O), [α]_D 25D -9.degree. (c 1, CHCl₃). VI (0.50 g.), 1 g. KOH, and 10 cc. MeOCH₂CH₂OH refluxed 15 min. yielded 0.34 g. 2'-methyloxazolino[5',4',2,3]cholestanol (VII), needles, m. 89.degree. (Me₂CO), [α]_D 25D 52.degree. (c 1, CHCl₃). VII (0.1 g.) in refluxing Et₂O with picric acid in Et₂O gave 0.11 g. picrate, needles, m. 204-5.degree. (Me₂CO), [α]_D 20D -30.degree. (c 1, CHCl₃). The reaction of the diaxial 2.beta.-bromocholestan-3.alpha.-ol methanesulfonate with NaN₃ yielded not the expected diaxial haloazide but rather an unsatd. azide.

L13 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1965:82827 CAPLUS
 DOCUMENT NUMBER: 62:82827
 ORIGINAL REFERENCE NO.: 62:14774c-b,14775a-b
 TITLE: C-Nor-D-homosteroids and related alkaloids. III. C-9 Configuration of jervine and related alkaloids
 AUTHOR(S): Masamune, Tadashi; Takasugi, Mitsuo; Mori, Yoichi
 CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
 SOURCE: Tetrahedron Letters (1965), (9), 489-95
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB cf. CA 61, 702d, 8351d. It was shown that jervine (1, R' = O) (II) and veratrina nine (III, delta.5) (IV) have the B/C trans configuration. III (no .delta.5), m. 191-3.degree., treated with (CH₂CO)₂NCl, the N-chloro deriv. treated with NaOMe and subsequently hydrolyzed gave an aldehyde, degraded with BuNO₂ and BuONa to an oxime, m. 228-32% hydrolyzed to give a ketone (V), C₂₁H₃₂O₂, m. 169-71.degree., .nu. 1667, 1597 cm.⁻¹, .lambda_{max} 258 m.m.u. (epsilon 15,000), N.M.R. tau. 7.42, 7.56, 9.05, identical with the ketone prepd. from hecogenin by Mitsuhashi and Shibata (CA 61, 13374b). Birch redn. of IV with Li in EtNH₂ in the presence of Me₂CHOH yielded 33% main product (VI), m. 182-4.degree., .lambda_{max} 210 m.m.u. (epsilon 16,000); triacetyl deriv. m. 144-6.degree., .tau. 4.58, 8.47. Catalytic hydrogenation of VI in AcOH over prerduced PtO₂ gave the compds. VII, m. 174-6.degree. Rf 0.41, and VIII, m. 181-3.degree., Rf 0.58 (CA 61, 8351d). Treatment of 11-deoxojervine (IX) with Li and EtNH₂ yielded 2 isomeric substances X, C₂₇H₄₃NO₂, m. 157-9.degree., Rf 0.78, .nu. 3300, 1715, 1063, 877, 806 cm.⁻¹, and XI, m. 190-2.degree., [α]_D -53.6.degree. (95% alc.), Rf 0.56, v 3400, 1063, 883, 806 cm.⁻¹. Hydrogenation of X gave a good yield of the 5,6-dihydro deriv. (XII), C₂₇H₄₅NO₂, m. 155-7.degree., [α]_D -59.4.degree., .nu. 3300, 1719, 1032, 878 cm.⁻¹, also produced in good yield by direct hydrogenation of IX. On acetylation XII and XI gave the corresponding triacetyl derivs., m. 157-9.degree., tau. 4.93, 5.17, 5.35, 8.34, 9.28, and m. 188-90.degree., [α]_D -10.2.degree., tau. 4.61, 8.47, 9.02. The N.M.R. spectra indicated the presence of a C-18 Me group and suggested the configuration of the C/D ring linkage. Hydrogenation of XI gave mainly VII, m. 172-4.degree. Rf 0.43, .nu. 3300, 1041, 855 cm.⁻¹, tau. 8.35, 9.25. Oxidn. of diacetyljervine-11.beta.-ol with CrO₃-C₅H₅N gave diacetyljervine, indicating that jervine-11.beta.-ol (XIII) has the same configuration at C-9 as II. Birch redn. of XIII gave 5% triol (XIV) and 50% diol (XV). XIV, m. 217-18.degree., Rf 0.15, was also obtained by redn. of 8,9-dihydroisojervine with LiAlH₄. The diol XV, C₂₇H₄₃NO₂, m. 198-9.degree., [α]_D -64.9.degree., Rf 0.48, .nu. 3400, 1064, 885, 806 cm.⁻¹, gave a triacetyl deriv., m. 188-90.degree., [α]_D -12.3.degree., tau. 4.58, 8.47, 9.02, showing cleavage of the ether bond and removal of the 11-OH group. Hydrogenation of XV gave 2 cryst. compds., XIII C₂₇H₄₅NO₂, m. 184-6.degree., Rf 0.50, v 3400, 3300, 1041, 885 cm.⁻¹, and VIII, C₂₇H₄₃NO₂, m. 180-2.degree., Rf 0.59, v 3300, 1715, 1039, 878 cm.⁻¹ XVI gave a triacetyl deriv., m. 201-4.degree., showing almost the same N.M.R. spectrum as that of the corresponding deriv. of XV. The spectrum of the triacetyl deriv. of VIII exhibited no sharp absorption near tau. 8.4, suggesting satn. of the C-12, C-13 double bond. The above transformations involved no reaction affecting the C-9 configuration and established the B/C configuration of II, 11-deoxojervine, and IV.

L13 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)

L13 ANSWER 17 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:82826 CAPIUS
 DOCUMENT NUMBER: 62:82826
 ORIGINAL REFERENCE NO.: 62:14773b,14774a-e
 TITLE: Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanolic and etianic acid derivatives on activated alumina
 AUTHOR(S): Hodosan, Francisc; Pop-Gocan, Alexandra
 CORPORATE SOURCE: Acad. R.P.R., Cluj
 SOURCE: Studii Cercetari Chim. Bucharest (1964), 13(8-9), 559-66
 DOCUMENT TYPE: Journal
 LANGUAGE: Romanian
 AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxo-, methyl-3.beta.-acetoxo-, methyl 6.alpha.-acetoxo-, methyl 12.alpha.-acetoxo-, methyl 3.alpha.,6.alpha.-diacetoxo-, methyl 3.alpha.,12.alpha.-diacetoxo-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and 5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxo-5.alpha.- and 5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > CO2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. deriva. favored the conception that the migration of a substance on the adsorbent surface is decid. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L13 ANSWER 19 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:720 CAPIUS
 DOCUMENT NUMBER: 62:720
 ORIGINAL REFERENCE NO.: 62:110d-e
 TITLE: Mass-spectrometric study of carbohydrates: methyl ethers of disaccharides
 AUTHOR(S): Chizhov, O. S.; Polyakova, L. A.; Kochetkov, N. K.
 SOURCE: Dokl. Akad. Nauk SSSR (1964), 158(3), 685-8
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB Mass spectra were obtained of .alpha.-Me hepta-O-methyl-gentiobioside (I), .alpha.,.beta.-Me hepta-O-methylmelibioside (II), .alpha.,.beta.-Me hepta-O-methylcellobioside (III), .alpha.,.beta.-Me hepta-O-methylmaltoside (IV), .alpha.,.beta.-Me hepta-O-methylmaltoside (V), and .alpha.-Me hepta-O-methylsophorose (VI). The more conspicuous differences between the mass spectra arise from the different positions of the O bridge, which is 1.fwdarw. 6 in I and II, 1.fwdarw. 4 in III, IV, and V, and 1.fwdarw. 2 in VI. Peaks at m/e = 380 and 305 are observed in the spectra of III, IV, V, and VI only, m/e = 380 being ascribed to loss of C atoms 5 and 6 together as methoxyethanal from ring B, and m/e = 305 to the further loss of (MeO)2CH.bul.. A peak at m/e = 161 is much stronger in III, IV, and V than in VI, and is attributed to loss of the ring A radical from the m/e = 380 fragment. Peaks at m/e = 279 and 353 are thought to be analogous to the peaks at m/e = 75 and 149 in methylated glucose; m/e = 279 probably arises from cleavage in ring A, and m/e = 353, which occurs only in I and II, from ring B cleavage.

L13 ANSWER 18 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:82825 CAPIUS
 DOCUMENT NUMBER: 62:82825
 ORIGINAL REFERENCE NO.: 62:14773b,14774a-e
 TITLE: Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanolic and etianic acid derivatives on activated alumina
 AUTHOR(S): Hodosan, Francisc; Pop-Gocan, Alexandra
 CORPORATE SOURCE: Acad. R.P.R., Cluj
 SOURCE: Rev. Roumaine Chim. (1964), 9(8-9), 523-30
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxo-, methyl-3.beta.-acetoxo-, methyl 6.alpha.-acetoxo-, methyl 12.alpha.-acetoxo-, methyl 3.alpha.,6.alpha.-diacetoxo-, methyl 3.alpha.,12.alpha.-diacetoxo-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and 5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxo-5.alpha.- and 5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > CO2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. deriva. favored the conception that the migration of a substance on the adsorbent surface is decid. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L13 ANSWER 20 OF 34 CAPIUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1965:719 CAPIUS
 DOCUMENT NUMBER: 62:719
 ORIGINAL REFERENCE NO.: 62:110b-d
 TITLE: Highly sensitive photoresistors and photocells of roasted Cds and some of their reversible aging processes
 AUTHOR(S): Kynev, St.; Stoyanov, V.; Shekderzhiiski, V.
 CORPORATE SOURCE: Phys. Inst., Sofia, Bulg.
 SOURCE: Acta Phys. Polon. (1964), 25(3), 313-21
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 AB A method of simply and quickly prepg. Cds tablets suitable for the production of photoresistors makes use of any Cds or Cds contg. CdsO4 that can be had from Soviet industry. The prepn. involves compression of the Cds power at 100 kg./sq. cm. followed by heating in an Ar atm. at 850-900 degree. for 1/2 hr. The photosensitivity of the material is increased by Cu addn. The high-resistance photosensitive sinter obtained is used to prep. by known methods photoresistors having improved mech. stability. On exposure to light these photoresistances age, with photocurrents decreasing 5-30% for the first 100-200 working hrs., and no change thereafter (measured at 2000 hrs.). Heating an already aged photoresistance some 10 sec. restores it to its initial state, and it can be repeated 7-8 times. The theory of the reversible aging is discussed. The photoresistors capable of prepn. by methods described can be used in automatic control and measuring devices and as a result of their feeding and intensifying ability they can be used as photomultipliers. Some properties of the photoresistors are given.

L13 ANSWER 21 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1964:404373 CAPIJUS
 DOCUMENT NUMBER: 61:4373
 ORIGINAL REFERENCE NO.: 61:702d-g
 TITLE: C-Nor-D-homosteroids and related alkaloids. II. A new alkaloid from *Veratrum* species, 11-deoxojervine
 AUTHOR(S): Masamune, Tadaashi; Mori, Yoichi; Takasugi, Mitsuo; Mural, Akira
 CORPORATE SOURCE: Hokkaido Univ., Sapporo, Japan
 SOURCE: Tetrahedron Letters (1964), (15-16), 913-17
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB cf. CA 58, 11437c. The ground roots of *V. album* var *grandiflorum* gave 0.08% veratramine and 0.3% new alkaloid (Ia) (R = H₂, R₁ = H) (I), but no jervine (Ia) (R = O, R₁ = H) (II). I m. 237-8.degree., [α]_D -33.2.degree. (EtOH); O,N-diacetate m. 163-4.degree. and 195-7.degree., [α]_D 1.1.degree.. I was recovered on redn. with LiAlH₄ or Li in liquid NH₃. Catalytic redn. of jervine-11.beta.ol (Ia) (R = .beta.-OH, H, R₁ = H) (III) in HOAc in the presence of Pt gave the 5,6-dihydro deriv. of Ia (R = .beta.-OH, H, R₁ = Ac) (IV), m. 124-7.degree. and 189-91.degree.; O,O,N-triacetate m. 184-6.degree.. Birch redn. of III in MeOH gave V, m. 148-50.degree.. On refluxing with HCl in MeOH, III gave 35% veratramine. The CO group of II did not form an oxime. Clemmensen redn. of 12,13-dihydrojervine was unsuccessful. Wolff-Kishner redn. of II gave VI, m. 211-13.degree., [α]_D +3.5.degree., and m. 236-8.degree.. VI gave an O,O,N-tri-acetate, m. 116-18.degree., [α]_D 46.degree.. Ultraviolet, infrared, and nuclear magnetic resonance data were used to confirm the structure of the compds.

L13 ANSWER 23 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1964:91112 CAPIJUS
 DOCUMENT NUMBER: 60:91112
 ORIGINAL REFERENCE NO.: 60:15944c-d
 TITLE: Degradation of solasodine
 AUTHOR(S): Magyar, G.
 CORPORATE SOURCE: Forschungsinst. Pharm. Ind., Budapest, Hung.
 SOURCE: Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 225-7
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB Acetylation of solasodine (I) with Ac₂O in the presence of C₅H₅N, quinoline, collidine, NEt₃, alkali carbonates, alk. earth carbonates, Na₃PO₄, Na, Mg, Fe, and some ion exchange resins was investigated. Optimum results were obtained with NEt₃ in the presence of an inert solvent as PhMe. The product was O,N-diacetylsolasodine (II). The conversion of II into the pseudoacetamido deriv. followed by oxidn. was effected by known methods. Subsequent pyrolytic cleavage of the 16-acyloxy side chain gave an overall yield of 58% 5,16-pregnadien-3 β -ol-20-one acetate. As in the degradation of I, pregna-5,16-dien-3.beta.-ol-20-one propionate and butyrate were obtained from I and 5.beta.-pregn-16-en-3.beta.-ol-20-one acetate and propionate from tomatidine.

L13 ANSWER 22 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1964:91113 CAPIJUS
 DOCUMENT NUMBER: 60:91113
 ORIGINAL REFERENCE NO.: 60:15944d-g
 TITLE: The *Veratrum* alkaloids
 AUTHOR(S): Poethke, W.; Kuntze, M.; Kerstan, W.
 CORPORATE SOURCE: Friedrich-Schiller Univ., Jena, Germany
 SOURCE: Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 91-9
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB Esters of rubijervine, so far not found in the *Veratrum* species, were prepd., and the amorphous alkaloids of *Veratrum album* were chromatographed to give rubijervine (I), isorubijervine (II), jervine (III), and 3 unknown alkalines. I and III were each treated with the desired acid chloride in pyridine; warming of I must be avoided. Thus prepd. were I diacetate (IV), m. 161-3.degree. (decompn.) (alc.); I dipropionate, m. 217-18.degree. (decompn.) (acetone); I bis(dl-.alpha.-methylbutyrate) (V), m. 195-6.degree. (decompn.) (acetone); dipropionyljervine, m. 121.degree. (decompn.) (dil. MeOH); and bis(dl-.alpha.-methylbutyryl)jervine, m. 174-6.degree. (decompn.) (dil. MeOH). I, IV, and esp. V depressed the blood pressure of cats at doses of 0.03 mg./kg. Alk. hydrolysis of the amorphous alkaloids obtained from *Veratrum album* gave besides germinine another amorphous fraction, which was paper-chromatographed; the following solvent systems gave partial sepn., showing the presence of I, II, III, and 2 other alkalines designated A and C: 90:10 CHCl₃-dioxane; 75:25 CHCl₃-MeCOEt, 90:10 or 80:20 CHCl₃-C₆H₆, and 25:75 CH₂:CHCl-EtOAc, all mixts. being satd. with HCONH₂. Germinine, isogerminine, protoverine, zygadenine, and an alkaloid designated Alkamine B did not travel with any of these solvent systems but could be sepd. by means of 40:50:10 BuOH-H₂O-AcOH. Crystn. of the hydrolyzed amorphous fraction from acetone and chromatography on an acidic Al₂O₃ column with CHCl₃ as eluent to which increasing quantities of EtOH were added yielded a mixt. of I and II (sepd. by fractional crystn. from EtOH into I, m. 23942.degree., and II, needles m. 216-18.degree. and prisms m. 237-8.degree.), III (m. 241-3.degree.), amorphous A, and cryst. B, m. 259-62.degree. (acetone). Chromatography on HCONH₂-treated silica gel with CHCl₃ + 1% EtOH as eluent gave good sepn. and yielded cryst. A, C₂₇H₄₃O₄N, m. 115-18.degree., crystd. by slow evapn. of its acetone-ether soln., as well as C, m. 215-17.degree. (acetone-ether).

L13 ANSWER 24 OF 34 CAPIJUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1964:75519 CAPIJUS
 DOCUMENT NUMBER: 60:75519
 ORIGINAL REFERENCE NO.: 60:13280h,13281a-c
 TITLE: Study on alkaloids of *Petilium eduardi*
 AUTHOR(S): Shakirov, R.; Nuriddinov, R. N.; Yunusov, S. Yu.
 CORPORATE SOURCE: Inst. Chem. Vegetable Compds., Tashkent
 SOURCE: Dokl. Akad. Nauk Uz. SSR (1963), 20(9), 23-6
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB From *P. eduardi*, imperiline (I) [ibid. 1961(4), 33; CA 57, 15165h], peimisine (II) [Chou, CA 41, 7677h], edpetilidine (III), edpetiline (IV), and alkaloids m. 247-51.degree. (V), m. 269-71.degree. (VI), and m. 228-31.degree. (VII), were isolated. The alkaloids (1:1-1:324) were extd. from dry above-ground parts (alkalinized with aq. NH₃) with CHCl₃. By recrystn. of the Et₂O-sol. alkaloids from Me₂CO, I and III (C₂₇H₄₅NO₂, m. 227-8.degree., [α]_D -48.19.degree. (pyridine); hydrochloride m. 283-5.degree.; hydrobromide m. 270-2.degree.; hydriodide m. 262-3.degree.; methiodide m. 292-4.degree.; nitrate m. 225.degree. (decompn.)) were isolated. In III an OH group and 3 C-Me groups were present; N-Me was not found. Mother liquors were treated with 5% H₂SO₄ and, after alkalization with NH₃, extd. with petr. ether and then with Et₂O. From the petr. ether-sol. portion V, and from the Et₂O-portion VI, VII, a little addnl. I, and II [m. 267-9.degree. (MeOH), [α]_D -44.62.degree. (EtOH); hydrochloride m. 250-2.degree.; hydrobromide m. 257-9.degree.; hydriodide m. 254-6.degree.; nitrate m. 230-2.degree.; oxime m. 190-1.degree.; hydrochloride of oxime m. 254.degree.; acetyl deriv. m. 238-40.degree.; N-Me deriv. m. 238-40.degree.] were obtained. II contained 4 C-Me groups. From the CHCl₃-sol. portion of alkaloids IV [m. 272-6.degree. (MeOH), [α]_D -57.89.degree. (MeOH); hydrochloride m. 220.degree.; hydrobromide m. 226.degree.; hydriodide m. 228.degree.; oxime m. 228-9.degree. (decompn.)) was obtained; tetraacetyl deriv. m. 224-6.degree.. Hydrolysis of IV with 10% H₂SO₄ gave I and D-glucose. Cf. CA 58, 10257e IV is the .beta.-D-glucoside of I.

L13 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1964:75518 CAPLUS
 DOCUMENT NUMBER: 60:75518
 ORIGINAL REFERENCE NO.: 60:13200f-h
 TITLE: Total synthesis of dl-garranine and dl-vestachine
 AUTHOR(S): Nagata, Wataru; Narisada, Masayuki; Wakabayashi, Toshio; Sugawara, Tetsuo
 CORPORATE SOURCE: Shionogi Co., Ltd., Osaka, Japan
 SOURCE: J. Am. Chem. Soc. (1964), 86(5), 929-30
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB cf. *ibid.* 85(15), 2342-3(1963). I (Ms = mesyl) was converted in 56% overall yield into dl-dihydrovestachine (II) (R = CH₂CH₂OH), previously converted into garranine (Wiesner, et al., CA 48, 11433f) and into vestachine (Pelletier and Kawazu, CA 60, 3021c).

L13 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1963:66694 CAPLUS
 DOCUMENT NUMBER: 58:66694
 ORIGINAL REFERENCE NO.: 58:11437e-g
 TITLE: Structure of isojoervine
 AUTHOR(S): Masamune, Tadashi; Takasugi, Mitsuo; Suzuki, Hiroshi; Kawahara, Shozo; Gohda, Masatoshi; Irie, Toshi
 CORPORATE SOURCE: Hokkaido Univ., Sapporo
 SOURCE: Bull. Chem. Soc. Japan (1962), 35, 1749-50
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB The structure I is found to be consonant with all chem. and spectral data for isojoervine, C₂₇H₃₉O₃N, which is a secondary base with two acylable hydroxyl groups and one .alpha.-.beta.-unsatd. oxo group, p 1684, 1630, and 1063 cm.⁻¹, .lambda. 330 m.mu. (.epsilon. 250), 252 m.mu. (inflection), .epsilon. 2900, 211 m.mu. (.epsilon. 9000). Redn. of I with Li and MeOH in NH₃ at -70.degree. afforded .alpha.-dihydrojoervinol. Oppenauer oxidn. of I with cyclohexanone and Al isopropoxide gave isojoervone, m. 112-14.degree.; [.alpha.]_D 140.degree. (EtOH), 1682, 1642, and 1620 cm.⁻¹; .lambda. 234 m.mu. (.epsilon. 22,000). Hydrogenation of I over Pt in HOAc gave dihydroisojoervine (II), m. 153-5.degree. and 171.5-2.5.degree., v 1679, 1625, and 1040 cm.⁻¹, .lambda. 238 m.mu. (.epsilon. 9400). ppenauer oxidn. of II produced dihydroisojoervone, m. 108-10.degree., v 1712, 1687, and 1629 cm.⁻¹, .lambda. 238 m.mu. (.epsilon. 9900). Hydride redn. of I yielded isojoervinol, m. 210-11.degree., .lambda. 212 m.mu. (.epsilon. 6400). The spectral data suggested a double bond at C8-C9. Birch redn. of II gave .alpha.-tetrahydroisojoervine (III), m. 147-9.degree., 1731 cm.⁻¹, and .beta.-tetrahydroisojoervine (IV), m. 138-42.degree. (CHCl₃ addn. compd.); v 1741 cm.⁻¹. Neither the triacetate of III, m. 179-82.degree., nor the triacetate of IV, m. 168-8.5.degree. was identical with 22,27-imino-17(20)-jervene-3,23-diol-11-one triacetate. Treatment of II with N tert-BuOK in refluxing tert-BuOH under N 1 hr. yielded V, m. 142-4.degree., v 1670, 1621, and 1036 cm.⁻¹, CHCl₃, 1678 and 1630 cm.⁻¹; .lambda. 239 m.mu. (.epsilon. 8500). V was a weak tertiary base; the pKa of V, I, and II were 6.12, 6.92, and 7.08 in 50% EtOH. Acetylation of V with Ac₂O and CSH₅N at 100.degree. 3 hrs. gave a O,O-diacetate, p (CHCl₃) 1725, 1685, and 1632 cm.⁻¹; pKa, 4.47. Similar reactions, involving migration of 13(17) double bond to .alpha.-.beta.-position of the carbonyl group followed by cyclization, were observed with III and IV.

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ACCESSION NUMBER: 1963:66693 CAPLUS
 DOCUMENT NUMBER: 58:66693
 ORIGINAL REFERENCE NO.: 58:11436g-h, 11437a-c
 TITLE: Epimeric 2-bromo derivatives of 4,4-dimethylcholestan-3-one
 AUTHOR(S): Malunowicz, I.
 CORPORATE SOURCE: Coll. Agr., Wroclaw, Pol.
 SOURCE: Bull. Acad. Polon. Sci. Ser. Sci. Chim. (1962), 10, 311-17
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Bromination of 3.39 g. 4,4-dimethylcholestan-3-one in HOAc and HBr by Br in HOAc at room temp., followed by NaBH₄ redn. of the oily product in C₆H₆-MeOH yielded the bromohydrin, which was acetylated with Ac₂O in CSH₅N at room temp. and gave 2.8 g. 2.alpha.-bromo-3.beta.-acetoxo-4,4-dimethylcholestan-3-one (I), m. 169-70.degree. (EtOAc-MeOH), [.alpha.]_D -17.degree. I refluxed 24 hrs. with 5% alc. KOH yielded 2.beta.-3.beta.-epoxy-4,4-dimethylcholestan-3-one, m. 97-8.degree. (Me₂CO-MeOH), [.alpha.]_D 53° which was reduced by LiAlH₄ in Et₂O to yield the known 4,4-dimethylcholestan-3.beta.-ol. Treatment of 600 mg. I with Zn-HOAc under reflux 1 hr. gave 300 mg. 4,4-dimethylcholestan-2-ene, m. 93-4.degree. (Me₂CO), [.alpha.]_D 29.degree., which was treated with BzOOH in CHCl₃ at 0.degree. 48 hrs. to give 80% 2.alpha.,3.alpha.-epoxy-4,4-dimethylcholestan-3-one (IV), m. 84-5.degree. (EtOAc-MeOH), [.alpha.]_D 33.degree. which with LiAlH₄ redn. yielded the known 4,4-dimethylcholestan-3.alpha.-ol. Shaking 500 mg. II with 10 ml. HBr in CHCl₃ 15 min. yielded 380 mg. 2.beta.-bromo-4,4-dimethylcholestan-3.alpha.-ol (III), m. 107-8.degree. (EtOAc-MeOH), [.alpha.]_D 60.degree., which with Ac₂O-CSH₅N at room temp. yielded the 3.alpha.-acetate, which, refluxed with alc. KOH 24 hrs. yielded II. Oxidn. of 500 mg. III in C₆H₆HOAc with 4.5 ml. Kiliani's mixt. at room temp. 30 min. yielded 260 mg. 2.beta.-bromo-4,4-dimethylcholestan-3-one (IV), m. 111-12.degree. (EtOAc-MeOH), [.alpha.]_D 114.degree., .gamma. 1731 cm.⁻¹, indicative of an equatorial Br. That the Br is .beta.-orientated is shown by (1) its high specific rotation; (2) the epimerization of IV with HBr in HOAc at 27.degree. 12 hrs. to yield the 2.alpha.-bromo-4,4-dimethylcholestan-3-one (V), m. 73-5.degree. (EtOAc-EtOH), [.alpha.]_D 12.degree., y 1734 cm.⁻¹; (3) NaBH₄ redn. of IV to yield 2.beta.-bromo-4,4-dimethylcholestan-3.beta.-ol, m. 155-6.degree. (EtOH), [.alpha.]_D 33.degree., which with CrO₃ yielded IV, and when refluxed with alc. KOH gave 4,4-dimethylcholestan-3-one. Ring A must therefore be in the boat form. Redn. of V with NaBH₄, followed by acetylation with Ac₂O-CSH₅N at room temp. yielded I. Thus the stable bromo ketone is the equatorial 2.alpha.-bromo ketone with ring A in the chair conformation.

L13 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1962:7883 CAPLUS
 DOCUMENT NUMBER: 56:7883
 ORIGINAL REFERENCE NO.: 56:1525h-1
 TITLE: The alkaloids of the above-ground organs of Veratrum album. Composition of the alkaloids
 AUTHOR(S): Jaspersen-Schib, R.; Flueck, H.
 CORPORATE SOURCE: Pharm. Inst., Zurich, Switz.
 SOURCE: Pharm. Acta Helv. (1961), 36, 461-71
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The alkaloids are sepd. by partition chromatography by using kieselguhr. The properties of the pure alkaloids, with respect to paper chromatography, were studied, and their identification in the alkaloidal exts. of V. album was then examd. by the same procedure. The presence of germin, geraldine, neogermbudine, veratrolyzysadenine, and protoveratrine A and B in 1 or more of the samples was demonstrated. In all the exts. examd., 1 unknown alkaloid (alkaloid V) was found. The most toxic exts. contained ester alkaloids. Expts. with isolated pieces of the first stomach as well as the uterus of the cow, treated with powdered leaves and solns. of five exts., showed a decrease of the contractions. A sample contg. chiefly ester alkaloids increased the contractions.

L13 ANSWER 32 OF 34 CAPIUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1958:79225 CAPIUS
 DOCUMENT NUMBER: 52:79225
 ORIGINAL REFERENCE NO.: 52:14078e-f
 TITLE: Methylnaphthoquinone and methylnaphthoquinone sodium bisulfite (vitamin K)
 AUTHOR(S): Hahn, I.; Scheunert, A.; Seel, H.
 CORPORATE SOURCE: Anstalt Vitaminforsch. Vitaminprüfung, Potadam-Rehrbrücke, Germany
 SOURCE: Pharm. Zentralhalle (1956), 95, 138-43
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB A description of menadione and menadione Na bisulfite as they will appear in a supplement to the German pharmacopeia (D.A.-B. VII). Most of the data correspond to those in U.S.P. XV, but in addn. color tests are described.

L13 ANSWER 33 OF 34 CAPIUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1957:25595 CAPIUS
 DOCUMENT NUMBER: 51:25595
 ORIGINAL REFERENCE NO.: 51:51011,5102a-b
 TITLE: Infrared study of the structure of a new antibiotic, Congoedine.
 AUTHOR(S): Julia, Marc; Joseph, Nicole
 SOURCE: Compt. rend. (1956), 243, 961-4
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB Congoedine (I) is progressively degraded in base to C15H20O3N6 (II), NH3, and glycoxyamidine (III). Further hydrolysis of II gave C15H19O4N5 (IV) and NH3. More drastic degradation of IV gave C12H14O3N4 (V) and .beta.-alanine. Thus, I was given the formula C18H26O3N10; HCl salt, m. 228.degree.; H2SO4 salt, m. 288.degree.; methyl orange salt, m. 224.degree.; picrate, m. 273.degree.. I in N NaOH at 20.degree. evolved NH3 and solid II, m. 263.degree.; picrate, m. 242.degree.; benzoate, m. 265.degree.. The filtrate was neutralized to give III; picrate, m. 218.degree.; HCl salt, m. 210.degree.. II in boiling N NaOH evolved NH3 and the solid IV sepd. as the monohydrate, m. 167.degree.; picrate, m. 250.degree.. If IV were boiled in 10N NaOH 2.5 hrs., then acidified with H2SO4, V.H2SO4, m. 240.degree., was obtained. .beta.-Alanine was also found in the mixture.

L13 ANSWER 34 OF 34 CAPIUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1957:25594 CAPIUS
 DOCUMENT NUMBER: 51:25594
 ORIGINAL REFERENCE NO.: 51:5100g-i,5101a-i
 TITLE: Jervine. X. Quaternary dihydro-1,3-oxazine salts as intermediates in the jervine rearrangement
 AUTHOR(S): Wintersteiner, O. P.; Moore, M. L.
 CORPORATE SOURCE: Squibb Inst. for Med. Research, New Brunswick, NJ
 SOURCE: J. Am. Chem. Soc. (1956), 78, 6193-9
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB Cf. C.A. 50, 13057g. N-Acetyl-jervine (4.88 g.) in 125 cc. abs. MeOH satd. at 0.degree. with gaseous HCl kept 1 hr. at room temp. and evapd. to dryness in vacuo, the residue distributed between 500 cc. CHCl3 and 300 cc. H2O, the aq. layer extd. with 75 cc. CHCl3, the combined CHCl3 exts. washed with N HCl, aq. Na2CO3, and H2O, dried, and evapd. to dryness, and the residue (2.8 g.) recrystd. from MeOH-EtOAc yielded 1.56 g. N-acetyl-jervine, m. 203-4.degree. (all m.ps. are cor.); the fine cryst. ppt. which had appeared in the aq. phase filtered and washed with cold H2O gave 1.65 g. quaternary chloride (I) (R = H and X = Cl) (II), m. 244-6.degree.; 2nd crop, m. 246-50.degree., 381 mg. II in AcOH oxidized, dild. with H2O, and distd., and the distillate treated with alc. dimedon gave only a few mg. trimeric self-condensation product of dimedon, m. 175-7.degree.. II (50 mg.) in 5 cc. MeOH treated at room temp. dropwise with 6 cc. 2N Na2CO3, dild. with 30 cc. H2O, and extd. with Et2O, and the ext. worked up yielded 32 mg. jervine 17-monoacetate, platelets, m. 250-3.degree. (from Me2CO-Et2O-pentane), [.alpha.]D22 -134.degree. (c 0.861, CHCl3). II (1.64 g.) in 150 cc. warm EtOH dild. with 12 cc. H2O, the soln. cooled, added to 960 mg. prerduced PtO2 in 10 cc. EtOH, and hydrogenated 70 min., the cryst. ppt. dissolved by adding 150 cc. H2O with slight warming, the soln. filtered from the catalyst and concd. in vacuo to a small vol., and the ppt. isolated by centrifuging gave 989 mg. HCl salt (III) of the tertiary base (IV) of II, m. 312-13.degree. (sometimes up to 320.degree.), [.alpha.]D25 -69.degree. (c 0.401, 80% EtOH). III (316 mg.) in 50 cc. MeOH and 20 cc. H2O treated with excess aq. NaHCO3 with stirring and the product isolated with CHCl3 yielded 212 mg. IV.0.5H2O, square platelets, m. 154-9.degree., [.alpha.]D25 -80.degree. (c 0.524, CHCl3). III treated with N KOH in MeOH at room temp. or reflux (3 hrs.) gave IV. III refluxed 2 hrs. with 3:1 EtOH-H2O-concd. HCl or refluxed 4 hrs. with 1:1 2,4-(O2N)2C6H3NHNH2 in 1% HCl was recovered unchanged. IV (48 mg.) in 2.5 cc. 10% AcOH refluxed 3 hrs. with an equal vol. concd. HCl, basified, and extd. with CHCl3 yielded 24 mg. unchanged IV, m. 148-53.degree.. IV treated with Ac2O-pyridine gave IV 3,23-diacetate (V), clusters of needles, m. 201-2.degree. (from aq. and then abs. MeOH), [.alpha.]D25 -77.degree. (c 0.826). V treated 18 hrs. at room temp. with 5% KOH in MeOH yielded IV.0.5H2O. V in Et2O treated with HCl in Et2O gave V.HCl, m. 247-52.degree. (from aq. MeOH). V in EtOH treated with 5N HCl and the EtOH boiled off quickly gave O-deacetylated III.2H2O. IV (42 mg.) treated with 2 cc. HClO4-contg. acetylolysis reagent and the ppt. centrifuged after short standing and washed with EtOH gave V.HClO4, m. 281-3.degree. (from MeOH), [.alpha.]D23 -60.degree. (c 0.443, 80% EtOH). I (R = Ac, X = ClO4) (192 mg.) in 30 cc. 93% EtOH hydrogenated over 123 mg. prerduced PtO2 until 1.3 mole equivs. H had been absorbed gave V.HClO4, m. 265-7.degree., which decompd. with NaHCO3 yielded V. V

L13 ANSWER 34 OF 34 CAPIUS COPYRIGHT 2001 ACS (Continued)
 (201 mg.) in 7 cc. Ac2O, 3 cc. AcOH, and 0.1 cc. concd. H2SO4 kept 46 hrs. at room temp., the soln. cooled, basified weakly with NaHCO3, and extd. with CHCl3, and the aq. phase distd. (1/3) into 25 cc. 2,4-(O2N)2C6H3NHNH2 reagent yielded 10 mg. 2,4-(O2N)2C6H3NHNH2:CHMe, m. 158-60.degree. (from abs. EtOH); the CHCl3 exts. washed, dried, and evapd., and the yellow resinous residue (152 mg.) dissolved in C6H6 and chromatographed gave 21 mg. V and then 11-oxoveratramine 3,23-diacetate (VI), needles, m. 238-40.5.degree. (from EtOAc), [.alpha.]D23 -113.degree. (c 0.586, CHCl3). VI (15 mg.) treated with Ac2O-pyridine gave the N-Ac deriv., m. 242-4.degree., [.alpha.]D24 -27.degree. (c 0.481, CHCl3). VI (2.0 g.) in 28 cc. Ac2O, 12 cc. AcOH, and 0.2 cc. concd. H2SO4 kept 17 hrs. at room temp., poured into H2O and crushed ice, basified slightly with NaHCO3, and extd. with CHCl3, and the residue (1.81 g.) from the ext. chromatographed from C6H6 on 50 g. Al2O3 gave after small amts. of unidentified material over 1 g. of solid which triturated with MeOH yielded 30 mg. VII (R = Ac) (VIIa), m. 208-9.degree. (decompn.) (from MeOH). VIIa (4.8 mg.) in 1 cc. EtOH and 1 cc. N HCl refluxed 4 hrs., cooled, and treated with excess BaCl2 gave 1.60 mg. BaSO4. VIIa (2.10 mg.) in 5 cc. EtOH contg. a small drop of 5% alc. KOH showed after 1 hr. an absorption max. at 250 m.m.u.. Further elution of the chromatographic column with MeOH and lyophilizing of the eluate gave Na salt (VIII) of VIIa. VIII (314 mg.) in 60 cc. 1:1:1 EtOH-H2O-20% HCl refluxed 1 hr., brought to pH 8 with Na2CO3, washed with CHCl3, reacidified, and treated with BaCl2 gave 86 mg. BaSO4; the residue (248 mg.) from the CHCl3 washing treated with Ac2O-pyridine yielded 214 mg. product which chromatographed on Al2O3 yielded 100 mg. stereoisomer of diacetyl-jervine, m. 226-30.degree. (from aq. EtOH), [.alpha.]D24 1.degree. (c 0.830, CHCl3).

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FILE 'REGISTRY' ENTERED AT 10:01:05 ON 13 NOV 2001

L1 STRUCTURE UPLOADED

L2 16 S L1

L3 4461975 S 4-6/NR

L4 7 S L1 SUB=L3 SAM

L5 STRUCTURE UPLOADED

L6 1 S L5 SUB=L3 SAM

L7 164 S L5 FULL SUB=L3

FILE 'CAPLUS' ENTERED AT 10:04:37 ON 13 NOV 2001

L8 12 S L7/THU

FILE 'USPATFULL' ENTERED AT 10:07:19 ON 13 NOV 2001

L9 5 S L7

FILE 'MARPAT' ENTERED AT 10:09:29 ON 13 NOV 2001

L10 0 S L7

L11 3 S L7 FULL

FILE 'CAOLD' ENTERED AT 10:11:14 ON 13 NOV 2001

L12 19 S L7

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FILE 'CAPLUS' ENTERED AT 10:11:43 ON 13 NOV 2001

L13 34 S E1-E19/OREF

L13 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1960:91847 CAPLUS
 DOCUMENT NUMBER: 54:91847
 ORIGINAL REFERENCE NO.: 54:17443g-1,17444a-e
 TITLE: The general importance of the reaction of alkaloids of the secondary amine type with formaldehyde
 AUTHOR(S): Auterhoff, H.; Moll, F.
 CORPORATE SOURCE: Tech. Hochschule, Braunschweig, Germany
 SOURCE: Arch. Pharm. (1960), 293, 132-41
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB The reaction of alkaloids of the secondary amine types with formaldehyde was investigated and it was assumed that this reaction was important in the biosynthesis of alkaloids. The nucleophilic strength of the alkaloids was detd. by the method of Brady and Cropper (CA 45, 8971e) with 2,4-(O2N)2C6H3Cl(I). Reaction velocity const. of the reaction with I (k2 times. 10-4) and const. of the alk. dissocn. KB were detd. Cephaeline (II) (0.254 g.) treated in 50 ml. abs. Et2O with 0.10 ml. 35% HCHO 4 hrs. at room temp., and the solvent evapd., yielded 0.279 g. N-(hydroxymethyl)cephaeline (III), m. 138-142 degree., [alpha.]20D -20 degree., (c 2, CHCl3), Rf (Partridge mixt.) 0.53. The paper chromatography showed uniformity of III, II and 35% HCHO reacted in NaOH soln. to give a mixt. of several products; dicephaelinomethane was not obtained. Conine (IV) (contg. small amts. of gamma.-coniceine) (0.304 g.) refluxed in 30 ml. Et2O with 0.2 ml. 35% HCHO and 0.5 g. K2CO3 30 min. yielded after evapn. of the solvent 0.270 g. N-(hydroxymethyl)conine(V), yellow oil, n20D 1.4779, [alpha.]20D 55 degree., (c 5.5), IV (0.272 g.) was heated with 0.032 g. paraformaldehyde and 5 mg. K2CO3 (VI) in a sealed tube 20 min. with shaking on a water bath; filtration and evapn. of Et2O yielded 0.185 g. diconinomethane, oil, n20D 1.4852, [alpha.]20D 49 degree., Rf 0.74. Conhydrine (VII) (0.5 g.) refluxed in 30 ml. Et2O with 0.60 ml. 35% HCHO and 1 g. VI 30 min., and the soln. evapd. after filtration yielded 0.564 g. N-(hydroxymethyl)conhydrine, yellow oil, n20D 1.4672, [alpha.]20D 132 degree., (CHCl3), [alpha.]20D 46 degree., (alc.), [alpha.]20D 106 degree., (alc., after 3 days), Rf 0.64. The prepn. of diconhydrinomethane failed. Cytisine (VIII) (0.159 g.) treated 4 hrs. at room temp. with 0.075 g. 35% HCHO yielded after filtration and evapn. 0.173 g. N-(hydroxymethyl)cytisine m. 110-14 degree., VIII (0.30 g.) treated at room temp. in 3 ml. abs. alc. with 0.147 g. 35% HCHO and 0.2 g. Ca(OH)2 12 hrs., 30 ml. Et2O and 0.1 g. VI added, and the mixt. filtered, yielded dicytisinomethane, m. 220-1 degree., Jervine (50 mg.) in 80 ml. abs. Et2O and 0.10 ml. 35% HCHO treated 15 min. at 40 degree. yielded 54 mg. N-(hydroxymethyl)jervine, m. 168-70 degree. (decompn.). The prepn. of hydroxymethyl compds. of bornylisobornylamine and diisobornylamine failed.
 k2 times. 10-4 and KB, resp., were detd. for the following compds.: piperidine, 175, 1.6 times. 10-3(25 degree.); morpholine, 44, -, NHET2, 2.2, 9.6 times. 10-3(25 degree.); cephaeline, 2.9, -, emetine, 1.5, 2.3 times. 10-7 (secondary N) (15 degree.) and 1.7 times. 10-6 (tertiary N);

L13 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1960:91846 CAPLUS
 DOCUMENT NUMBER: 54:91846
 ORIGINAL REFERENCE NO.: 54:17443g-1,17444a-e
 TITLE: Synthesis of some quaternary granatanol esters of pharmacological activity
 AUTHOR(S): Mackovics, S.
 CORPORATE SOURCE: Univ. Szeged, Hungary
 SOURCE: Acta Univ. Szegediensis Acta Phys. et Chem. (1959), 5(No. 1-2), 47-52
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Pseudopelletierine was reduced to 3.beta.-granatanol (I), m. 99-100 degree., (picrate m. 264-5 degree.), by the method of Ciamician and Silber [Ber. 25, 1062(1892)] and to 3.alpha.-granatanol (II), hygroscopic [picrate 275-6 degree., (MeOH)], by the method of Alder and Dortmann (CA 49, 3984h). The granatanol obtained was extd. from benzene, the soln. dried over MgSO4, evapd. and distd. under reduced pressure. Recrystn. from a mixt. 2:4 anhyd. benzene-petr. ether gave a very pure alc. O-Acetyl-3.beta.-granatanol (III) b9 135-50 degree., (picrate m. 201 degree.), and O-acetyl-3.alpha.-granatanol (IV), b10 172-90 degree., (picrate m. 204 degree.), were prepd. by distn. of the corresponding alc. with glacial HOAc under reduced pressure. The following quaternary derivs. were also prepd.: N,N-di-Me deriv. of IV, m. 329 degree.; N-Me, N-Et deriv. of IV, m. 337.5 degree.; N-Me, N-Pr deriv. of IV, m. 240 degree.; N,N-di-Me deriv. of III, m. 331 degree.; N-Me, N-Et deriv. of III, m. 289.5 degree.; N-Me, N-Pr deriv. of III, m. 290 degree..

L13 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2001 ACS (Continued)
 conine, 0.12, 1.3 times. 10-3(25 degree.); conhydrine, 0.06; 2 times. 10-4(18 degree.); jervine, about 0.04, -; diisobornylamine, about 0.002, -; theophylline, about 0.04, 1.9 times. 10-14(25 degree.); theobromine, about 0.004, 1.3 times. 10-14(18 degree.); yohimbine, about 0.002, 10-11 (secondary N) (23 degree.), and 2.8 times. 10-7 (tertiary N). The following alkaloids were chromatographed on Partridge mixt. Detection was carried out with Dragendorff reagent (a), 0.2% ninhydrin in BuOH(b) and heating at 110 degree. or 1% sodium nitroprusside(c) and after treating with 10% NH4OH. The following data were obtained: IV, Rf 0.72, red-brown(a), violet(b); Rf 0.72, red-brown(a); gamma.-coniceine, Rf 0.61, red-violet(a), red(c); VII, Rf 0.62, yellowish(a), violet(b). The influence of basicity and steric effects on the reactivity of the named alkaloids were discussed.

L13 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1958:79226 CAPLUS
 DOCUMENT NUMBER: 52:79226
 ORIGINAL REFERENCE NO.: 52:14078f-b
 TITLE: Trichloroacetates of several alkaloids
 AUTHOR(S): Poethke, H.; Kuntze, Martin
 CORPORATE SOURCE: Friedrich Schiller Univ., Jena, Germany
 SOURCE: Pharm. Zentralhalle (1957), 96, 463-6
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable
 AB The singular behavior of jervine trichloroacetate, which evolves CCl3CO2H (I) on melting or on long heating at 100 degree., occasioned the examn. of several other alkaloid trichloroacetates (II). Ephedrine (III) (0.5 g.) and 0.6 g. I dissolved in 4 ml. water by heating, cooled, rubbed, and the ppt. recrystd. from a small amt. of hot water gave III salt of I, m. 118-24 degree. (with considerable swelling). Similarly were prepd. the following salts of I d,l-III, m. 118-24 degree. (with considerable swelling); quinine di-l, m. 116-20 degree. (unsharp); brucine, m. 131-4 degree. (unsharp); strychnine (IV), m. 281-3 degree. (m.p. of IV since I was evolved between 250-60 degree.). Cond. measurements established that the II were strong electrolytes and true salts.

L13 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:404189 CAPLUS

DOCUMENT NUMBER: 65:4189

ORIGINAL REFERENCE NO.: 65:774b-h

TITLE: Photochemical reactions, XXXVI. Photolytic

degradation

of O-acetylervine: structure and photochemical reactions of the nitrogen-free main products

AUTHOR(S): Bozzato, G.; Schaffner, K.; Jeger, O.

CORPORATE SOURCE: Eidg. Tech. Hochschule, Zurich, Switz.

SOURCE: Chimia (Aarau) (1966), 20(4), 114-16

DOCUMENT TYPE: Journal

LANGUAGE: German

AB cf. CA 64, 19714g. On irradiation in dioxane with light λ_{max} 253.7 m μ , O-acetylervine (I) reacted to form II, III, and IV. The N-acetyl deriv. (V) was photostable under the same conditions. III, m. 135-6.degree., was photodecarbonylated to VI, m. 108.degree., and IV, m. 128.5.degree., was photohydrolyzed to VII, m. 111.degree.. III formed an aldoxime (VIII), m. 141-2.degree., which was converted (MeSO₃H, pyridine) to the nitrile (IX), m. 152.degree.. Treatment of VI with 0.1N KOH at room temp. yielded X, m. 158-66.degree.; identical with the product

formed from XI (Fried and Klingsberg, CA 48, 13701b) by hydrogenation (Pd-C, EtOH) to XII, m. 139.degree., followed by hydrolysis with K₂CO₃-MeOH to XIII, m. 100.degree. and epimerization (Me₂SO, KO-tert-Bu) to X. The vinylidene ether structure of IV was shown by ozonolysis and hydrolytic decompn. to the acetaldehyde, identified by its

2,4-dinitrophenylhydrazones (30% yield), and by hydrogenation (Pd-C, EtOH) of the vinylidene double bond to XIV, m. 143.5.degree.. IV and XIV were hydrolyzed (KOH, boiling MeOH) to XV, m. 127.5.degree., and XVI, m. 189-90.degree., resp. XIV was also reacylated to IV, which was chem. hydrolyzed (H₂SO₄, glacial HOAc) to VII, in turn converted (KOH, boiling aq. MeOH) to XVII, m.

108.degree.. XVII was acetylated to the acetoxyketone (XVIII), m. 92.degree.. Ir, uv, and N.M.R. data and $[\alpha]_D$ for the various compds. were reported and discussed.

L13 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:404188 CAPLUS

DOCUMENT NUMBER: 65:4188

ORIGINAL REFERENCE NO.: 65:774a-b

TITLE: Rearrangement in the substitution reaction of

3-oxo-4.beta.-bromo-5.beta.-steroids

AUTHOR(S): Sato, Yasuo; Muko, Masaaki; Ogaki, Yuichi; Takahashi, Tomoyoshi; Kimura, Takako; Aoki, Hiromitsu; Hagitani, Akira

CORPORATE SOURCE: St. Paul's Univ., Tokyo

SOURCE: Bull. Chem. Soc. Japan (1966), 39(4), 855

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 4.beta.-Bromo-5.beta.-cholestan-3-one (8 g.) in 280 cc. AcOH refluxed 6 hrs. under N with 56 g. AcOK yielded 2.6 g. 2.beta.-acetoxy-5.beta.-cholestan-3-one, m. 149-51.degree., $[\alpha]_D^{25}$ 8.0.degree.,

$[\alpha]_D^{25}$ 400 8.0.degree., $[\alpha]_D^{25}$ -195.0.degree., $[\alpha]_D^{25}$ 205.0.degree.. Me 4.beta.-bromo-3-oxocholanoate (2 g.), 11 g. AcOK, and 55 cc. AcOH yielded similarly 1.3 g. Me 2.beta.-acetoxy-3-oxocholanoate, m. 168.5-70.degree., $[\alpha]_D^{25}$ 5.5.degree., $[\alpha]_D^{25}$ 380 9.0.degree., $[\alpha]_D^{25}$ 309 -190.0.degree., $[\alpha]_D^{25}$ 230.0.degree..

L13 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:68046 CAPLUS

DOCUMENT NUMBER: 64:68046

ORIGINAL REFERENCE NO.: 64:12746f-h, 12747a-b

TITLE: Some pharmacologic effects of Veratrum alkaloids in

sheep and goats

AUTHOR(S): Buck, W. B.; Keeler, G. W.; Blum, Wayne

CORPORATE SOURCE: Natl. Animal Disease Lab., Ames, IA

SOURCE: Am. J. Vet. Res. (1965), 27(4), 340-54

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Infusion of EtOH exts. and purified alkaloids from V. californicum and ester alkaloidal mixts. from V. vinidex into the jugular vein resulted in

potent hyperglycemic effect in intact and adrenalectomized female sheep and goats. When large amts. of alkaloid were infused, there was a concomitant increase in electroencephalogram (EEG) wave amplitude, and this was followed in a few sec. by complete cessation of EEG activity. This treatment also reduced respiration and stimulated skeletal muscle

and gastrointestinal activity. Administration of O₂ by artificial respiration reversed the effects on the EEG and enabled the animals to recover rapidly. The hyperglycemic effect, which may have resulted from an inhibition of glucose utilization, probably caused cessation of EEG activity and may explain the mechanism by which Veratrum produces congenital cyclopian deformities in lambs (ibid. 24(103), 1164-75(1963)). 17 references.

L13 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1966:68046 CAPLUS

DOCUMENT NUMBER: 64:68046

ORIGINAL REFERENCE NO.: 64:12746f-h, 12747a-b

TITLE: Alkaloids of Petilium. eduardi

AUTHOR(S): Shakirov, R.; Nuriddinov, R. N.; Yunusov, S. Yu.

CORPORATE SOURCE: Inst. Chem. Vegetable Comps., Tashkent

SOURCE: Khim. Prirodn. Soedin., Akad. Nauk Uz. SSR (1965),

(6), 384-92

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB cf. CA 63, 1858e, 3007f. Imperialine (I), edpetilidine (II), eduardine (III), and edpetiline (IV) (total alkaloids 1.1%) were obtained from

upper parts of P. eduardi, gathered in Shargun area by the described method (loc. cit.). Raw material, gathered in Babatag (total alkaloids 1.25%) gave I and IV; the alkaloid fraction, obtained by the extrn. of the acid aq. soln. with CHCl₃, gave by fractional crystn. III and edpetilidine (V), C₂₇H₄₅O₂N, m. 269-71.degree. (MeOH), $[\alpha]_D^{25}$ 42.48.degree. (c 0.306, alc.), nu. 3425 (OH), 1465, and 2930 (C=O) cm.⁻¹; HCl salt m. 283.degree. (decompn.); HBr salt m. 281-2.degree.. Peimisine (VI) and

the base 8, m. 253-7.degree. (Me₂CO-MeOH 9:1) were obtained from the mother liquor. The mother liquor after VI gave imperialone. II, C₂₇H₄₅O₂N, m. 227-8.degree. (MeOH), was a tertiary base, $[\alpha]_D^{25}$ -48.19.degree. (c 2.324, pyridine), Rf 0.85 (BuOH satd. with 5% AcOH), nu. 3425 (OH),

2925, and 1455 (C=O) cm.⁻¹; HCl salt m. 283-5.degree. (Me₂CO); HBr salt m. 270-2.degree. (Me₂CO); HI salt m. 262-3.degree. (Me₂CO); nitrate m. 225.degree. (H₂O, decompn.); methiodide m. 292-4.degree. (MeOH). III, C₂₇H₄₃O₂N, m. 247-51.degree. (EtOH), was a tertiary base without the NMe group, $[\alpha]_D^{25}$ -53.02 (c 0.977; MeOH), Rf 0.83 (BuOH satd. with 5% AcOH), nu. 3530 (OH), 1700 (CO), 1450, and 2930 (C=O) cm.⁻¹ Rf values of I, IV, and V in the system BuOH-AcOH-H₂O 4:1:5 were 0.80, 0.86, and 0.82, resp. Curves of uv spectra of I and IV were shown. The structure of IV was given (loc. cit.).

09/708,974

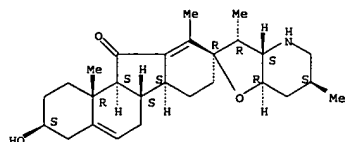
L8 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

P1640 CAPLUS
(6) Chiang, C.; Dev Biol 1999, V205, P1 CAPLUS
(7) Chiang, C.; Nature 1996, V383, P407 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:436553 CAPLUS
DOCUMENT NUMBER: 131:204460
TITLE: Steroidal alkaloids and stilbenoids from *Veratrum taliense*
AUTHOR(S): Zhou, Chang Xin; Tanaka, Junichi; Cheng, Christopher H. K.; Hige, Tatsuo; Tan, Ren Xiang
CORPORATE SOURCE: Institute Biotechnology, Department Biological Science
Rep. Technology, Nanjing Univ., Nanjing, 210093, Peop. China
SOURCE: Planta Med. (1999), 65(5), 480-482
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Phytochem. investigation of roots and rhizomes of *Veratrum taliense* yielded a new and six known steroidal alkaloids as well as a new and one reported stilbene deriv. By a combination of spectral methods (IR, MS, 1H- and 13C-NMR, COSY, HMQC, HMBC, and NOESY), the structure of the new alkaloid was established as 15-angeloylgervine while the known ones were identified as 15-(2-methylbutyryl)gervine, jervine, 3-veratroylylgadenine, gervine, veramiline 3-O-.beta.-D-glucopyranoside and stenophylline B-3-O-.beta.-D-glucopyranoside. The new stilbenoid, named veraphenol, was detd. to be
2-(3',5'-dihydroxyphenyl)-6-hydroxybenzofuran, and the known one was shown to be resveratrol. The in vitro enzyme assay indicated that 3-veratroylylgadenine and resveratrol are inhibitors of xanthine oxidase. The enzyme inhibitory action of resveratrol, the most active compd. found so far in *V. taliense*, is dose-dependent with the
IC50 value at 30 .mu.M (the IC50 value of allopurinol used as a pos. control in the study is 10 mM).
IT 469-59-0, Jervine
RL: BOC (Biological occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(steroidal alkaloids and stilbenoids from *Veratrum taliense*)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)
Absolute stereochemistry.

L8 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2001 ACS (Continued)

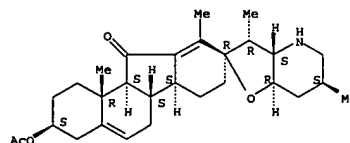


REFERENCE COUNT: 9
REFERENCE(S):

(2) Han, X.; Magn Reson Chem 1991, V29, P100 CAPLUS
(3) Jayatilake, G.; J Nat Prod 1993, V56, P1805 CAPLUS
(6) Mizuno, M.; Phytochemistry 1990, V29, P359 CAPLUS
(7) Osada, Y.; Eur J Pharmacol 1993, V241, P183 CAPLUS
(8) Oshima, Y.; Tetrahedron 1995, V51, P11979 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2001 ACS

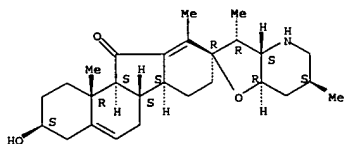
ACCESSION NUMBER: 1995:686451 CAPLUS
DOCUMENT NUMBER: 123:102413
TITLE: O-acetylervine: a new .beta.-adrenoceptor agonist from *Veratrum album*
AUTHOR(S): Gholami, Amir; Afshar, Khadija; Saeed, S. A.; Ali, A.; Rahman, Aslam
CORPORATE SOURCE: Medical College, Aga Khan Univ., Karachi, 74800, Pak.
SOURCE: Arch. Pharmacol Res. (1995), 18(2), 129-32
CODEN: APHRDQ; ISSN: 0253-6269
DOCUMENT TYPE: Journal
LANGUAGE: English
AB I.v. administration of O-acetylervine (an alkaloid from *Veratrum album*) produced a dose-dependent (10-100 .mu.g/kg) fall in blood pressure and tachycardia in anesthetized normotensive rats. Pretreatment of animals with propranolol (1 mg/kg) abolished these cardiovascular responses of O-acetylervine similar to that of isoprenaline (1 .mu.g/kg). In isolated tissue expts., O-acetylervine (10-100 .mu.g/mL) produced a dose-dependent relaxation of phenylephrine-induced contraction of the rabbit aorta. In guinea-pig spontaneously beating atria, it caused pos. inotropic and chronotropic responses in a dose-dependent fashion (10-100 .mu.g/mL). These responses were abolished in the presence of propranolol (1 .mu.g/mL) similar to that of isoprenaline. These results indicate that O-acetylervine is a adrenoceptor stimulant (.beta.1 and .beta.2) like isoprenaline.
IT 14788-78-4
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(O-acetylervine: a new .beta.-adrenoceptor agonist from *Veratrum album*)
RN 14788-78-4 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(2H)-one, 3-(acetyloxy)-1,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)
Absolute stereochemistry.



09/708,974

L# ANSWER 12 OF 12 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1972:108077 CAPLUS
DOCUMENT NUMBER: 76:108077
TITLE: Antibioinflammatory activity of jervine
AUTHOR(S): Gerasimchenko, G. M.; Bondarenko, W. V.; Semchenko, V. P.
CORPORATE SOURCE: USSR
SOURCE: Aktual. Vop. Farm. (1970), Volume Date 1968 169-71
CODEN: AKVFAM
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Jervine (I) [469-59-0] injected s.c. at 5 mg/kg/day 7 days into rats with a paw inflammation, induced by s.c. implanted cotton pellets, decreased the granuloma exudate and proliferation by 45 and 41%, resp., and the adrenal ascorbic acid [50-81-7] by 30%.
IT 469-59-0
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (inflammation inhibition by)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,974

L9 ANSWER 5 OF 5 USPATFULL
 2000:38195 USPATFULL
 TITLE: Method and apparatus for rapid determinations of voltage and current in wires and conductors
 INVENTOR(S): Singer, Jerome R., 2917 Avalon Ave., Berkeley, CA, United States 94705
 Libove, Joel M., 34 Canyon View Dr., Orinda, CA, United States 94863

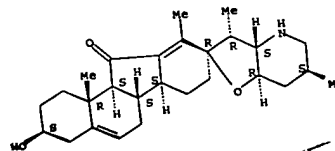
PATENT INFORMATION:
 APPLICATION INFO.: US 6043641
 RELATED APPLN. INFO.: US 1998-81263
 Continuation-in-part of Ser. No. US 1998-25043, filed on 17 Feb 1998

DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Do, Diep W.
 LEGAL REPRESENTATIVE: Cohen, Howard
 NUMBER OF CLAIMS: 22

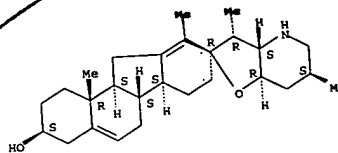
EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 7 Drawing Figure(s); 3 Drawing Page(s)

ABSTRACT: A device for non-contact, non-invasive measurement of current or power in a wire, cable or conductor includes a small coil having multiple turns with a thin ferromagnetic strip. The coil may be secured to a wand or housing adapted to be used to place the coil in close proximity to the wire, cable or conductor, whereby a voltage is induced in the coil. An amplifier and/or an analog or digital signal processor is utilized to increase sensitivity. A readout indicates the magnitude of the induced voltage, and a scaling device renders the readout display indicative of the current or power in the wire, cable, or conductor. The readout may comprise a digital display, a series of light emitting devices, an oscilloscope, a digital computer display system, or a flashing light emitting device having a flash rate proportional to the magnitude of voltage. The device may be constructed in a wand or pen-like fashion, with the coil and strip incorporated into the wand. The device may be combined with a voltage sensor to read out relative voltages.
 IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
 RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)
 Absolute stereochemistry.

L9 ANSWER 5 OF 5 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)
 Absolute stereochemistry.



09/708,974

L13 34 S E1-E19/OREF

FILE 'BEILSTEIN' ENTERED AT 10:15:02 ON 13 NOV 2001

L14 309 S L5 FULL

L15 0 S L14 AND USC/FA

FILE 'CAPLUS' ENTERED AT 10:17:03 ON 13 NOV 2001